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ABSTRACT

This publication includes reports of research on children in progress or recently completed from March 1974 through August 1974. Each entry includes information concerning the investigator, purpose, subjects, methods, duration, cooperating groups, and findings (if available). The reports are listed under several topical headings: (1) long-term research, (2) growth and development, (3) special groups of children, (4) the child in the family, (5) socioeconomic and cultural factors, (6) educational factors and services, (7) social services, and (8) health services. In addition to the reports on research, an extensive bibliography on day care is included. (BRT)

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Bulletin 33

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NOTES: *Research Relating to Children* is prepared by the ERIC Clearinghouse on Early Childhood Education under the direction of Lilian G. Katz, Ph.D. Investigators who wish to submit abstracts of their research projects should address correspondence to:

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PREFACE

Research Relating to Children, Bulletin 33 includes reports of research in progress or recently completed research. With the exception of the section on Long-Term Research, it does not repeat studies included in *Bulletins 3* through *32* even though they are still in progress. This issue, therefore, does not reflect all research relating to children, but only research reported to us from March 1974 through August 1974.

In addition to reports of current research, *Bulletin 33* contains *Day Care: A Bibliography*, which updates previous ERIC Clearinghouse on Early Childhood Education bibliographies on the subject. The bibliographic sources include ERIC documents, journal articles, books, and pamphlets that we hope you will find useful. We wish to thank the Day Care and Child Development Council of America for permission to include their recent publications.

Publication references and plans are cited in the abstracts of research in the bulletin. The Clearinghouse, however, does not maintain information on the publications of the investigators. If you wish to obtain further details about any of the projects, please check professional journals in the appropriate field or write directly to the investigator.

Although we announced that *Bulletin 32* would be the last issue of *Research Relating to Children* prepared by the ERIC Clearinghouse on Early Childhood Education, we are pleased to continue to serve you. We wish to thank investigators who have submitted reports of their research and those who have informed us of other studies. We wish to acknowledge the valuable assistance of the Science Information Exchange and the foundations that provided us with information about their research grants.

Lilian G. Katz, Ph.D.
Director
ERIC Clearinghouse on Early Childhood Education

To Research Investigators:

This publication is only as complete as you are willing to make it. On page 147 you will find a form for reporting your current research. On page 151 you will find a form to let us know of other investigators who are working in the field. Please let us hear from you.

Research Relating to Children
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DAY CARE: A BIBLIOGRAPHY

The bibliography contains citations for 90 day care resources including journal articles; books; pamphlets; a catalog of publications; and ERIC documents, including two abstract bibliographies on day care. Contents of a document are identified by descriptor terms, which are listed under citations. Descriptors with asterisks denote the document's major subject matter; terms without asterisks suggest topics of lesser import.

Only resources published during and after 1973 were selected for this compilation (a few exceptions were included because they were unavailable elsewhere). Readers interested in resources published previously are referred to the two ERIC abstract bibliographies on day care compiled by Norma Howard and to the catalog of publications published by the Day Care and Child Development Council.

It is important for readers of *Research Relating to Children* to know that availability and prices of ERIC documents have changed. Documents listed in bibliographies in *Bulletins 31* and *32*, as well as documents denoted by ED numbers in this bibliography, should be ordered from Computer Microfilm International Corporation. ERIC documents may be ordered on microfiche (MF) or in hard copy (HC). To read MF (a transparent film card), use a microfiche reader, available in most libraries. HC is a photocopy reproduction of the original document. See information on how to order documents at the end of the bibliography.

Angrist, Shirley S. and Lave, Judith R. Issues surrounding day care. *Family Coordinator*, October 1973, 22(4), 457-464.

*Child Care Centers, Costs, *Day Care Programs, Disadvantaged Youth, *Economic Disadvantagement, *Government Role, Labor Force, Middle Class Mothers, Welfare Problems, *Working Women

Balakshin, Maria. Children's centers and early childhood education. *Thrust for Education Leadership*, February 1973, 2(4), 25-27.

*Child Care, *Child Care Centers, *Day Care Programs, *Early Childhood Education, *Educational Environment, Instruction, Instructional Staff, School Districts, Supervision, Working Parents

Beaglehole, Ruth. Silverlake People's Playground. *Edcentric*, June-July 1973, Nos. 24 and 25, 6-7 and 48-51.

*Child Care Occupations, *Child Development Centers, *Day Care Services, *Education, Human Services

Bedger, Jean E. *Findings, day care cost analysis project: An analysis of income and expenditures collected from 28 day care centers.* May 1972, 83 pp. ED 085 097.

*Cost Effectiveness, *Day Care Programs, Expenditures, *Field Studies, Income, Methodology, Operating Expenses, *Program Budgeting, *Program Costs

Bedger, Jean E. *et al. Financial reporting and cost analysis manual for day care centers, Head Start, and other programs.* March 1973, 194 pp. ED 085 099.

Accounting, *Bookkeeping, *Cost Effectiveness, *Day Care Services, Expenditures, Income, Manuals, *Program Administration, Program Costs, *Recordkeeping, Unit Costs

Benedek, Ellissa P. and Salguero, Rochelle. A summer day treatment service program. *Journal of Child Psychiatry,* October 1973, 12(4), 724-737.

Community Involvement, *Day Care Services, *Emotionally Disturbed Children, Intervention, Parent Participation, *Program Evaluation, *Psychiatry, Social Behavior, *Summer Programs

Biber, Barbara. Child development associate: A professional role for developmental day care. *Theory into Practice,* April 1973, 12(2), 89-96.

*Child Development Associate, *Child Development Specialists, *Childhood Needs, Cultural Pluralism, *Day Care Services, Learning, *Objectives, Professional Personnel, Social Change

Blumenfeld, Harry and Schwimmer, Barbara. *The challenge of day care in the seventies: One agency's response.* 1973, 22 pp. ED 087 532.

Community Consultant Programs, Cultural Awareness, *Day Care Services, *Mental Health Programs, Parent Attitudes, *Parent Participation, Relevance (Education), Religious Agencies, Stereotypes, *Teacher Education

Boocock, Sarane Spence. *A crosscultural analysis of the child care system.* October 1973, 104 pp. ED 088 584.

Child Care Workers, *Child Rearing, *Cross Cultural Studies, *Day Care Services, Educational Sociology, Family Life, Federal Aid, *Social Change, *Social Problems, Socioeconomic Influences, Working Women

Caldwell, Bettye M. Can young children have a quality life in day care? *Young Children,* April 1973, 28(4), 197-208.

*Child Development, *Day Care Services, *Early Childhood Education, *Early Experience, Emotional Development, Health, *Research Reviews (Publications), Skill Development

Check, Becky. *Planning playgrounds for day care.* November 1973, 37 pp. ED 083 719.

Community Involvement, Day Care Programs, *Day Care Services, Educational Facilities, Landscaping, Merchandise Information, *Models, Planning, *Planning (Facilities), Playground Activities, *Playgrounds, Purchasing, Site Selection

Child Development Services Bureau (DHEW/OCD), Washington, D. C. *Guides for day care licensing.* 1973, 60 pp. ED 084 009.

*Certification, *Day Care Programs, Day Care Services, *Guides, *Models, Program Administration, Safety, Sanitation, *Standards, Zoning

Clifford, Howard. *Current trends and issues in day care in Canada.* June 1973, 32 pp. ED 087 551.

*Childhood Needs, Community Services, *Day Care Programs, *Day Care Services, *Interagency Coordination, *Parent Participation, Personnel Evaluation

Colorado State Department of Education, Denver. *Developing training support systems for home day care.* June 1973, 55 pp. ED 087 558.

*Attendant Training, Child Care Occupations, *Day Care Services, *Educational Programs, *Guidelines, Preschool Curriculum Program Coordination, *Program Planning, Training Objectives, Working Women

Committee on Infant and Preschool Child. *Recommendations for day care centers for infants and children.* Evanston, Illinois: American Academy of Pediatrics, 1973. Paperback, 66 pp., $3.00. Available from the Academy, P. O. Box 1034, Evanston, Illinois 60204.

Comptroller General of the United States, Washington, D. C. *Some Problems in contracting for federally assisted child-care services. Report to the Congress by the Comptroller General of the United States.* June 1973, 53 pp. ED 088 560. Also available from U. S. General Accounting Office, Room 6417, 441 G Street, N.W., Washington, D. C. 20548. Order No. B-164031(3), $1.00.

Child Care, Community Coordination, Cost Effectiveness, *Day Care Services, *Federal Aid, *Federal State Relationship, Government Publications, *Interagency Coordination, Program Administration, *Program Evaluation

Congress of the United States, Washington, D. C. *Social and rehabilitation Services. Oversight hearing before the select subcommittee on education of the Committee on Education and Labor, House of Representatives, Ninety-third Congress, First session on social and rehabilitation services regulations as they affect child care.* March 1973, 99 pp. ED 087 521.

*Day Care Programs, *Federal Legislation, Federal State Relationship, Government Publications, *Rehabilitation Programs, *Social Services, *State Federal Aid, Working Parents

Day Care and Child Development Council of America. *Catalog of publications.* Summer 1973, 28 pp., free. (A supplementary catalog, Spring 1974, is also free.) Available from DCCDCA, 1012 - 14th Street, N.W., Washington, D. C. 20005.

Ditmore, Jack and Prosser, W. R. *A study of day care's effect on the labor force participation of low income mothers.* Working papers. 1973, 113 pp. ED 080 627.

Child Care, Child Rearing, *Day Care Services, Federal Aid, *Federal Programs, *Labor Force, *Low Income Groups, Welfare Services, *Working Women

Dittmann, Laura L. (Ed.) *The infants we care for.* Washington, D. C.: National Association for the Education of Young Children, 1973. Paperback, 108 pp., no price indicated. Available from the Association, 1834 Connecticut Avenue, N.W., Washington, D. C. 20009.

Dragsten, Susan S. and Lee, Lee C. *Infants' social behavior in a naturalistic vs. experimental setting.* No date indicated, 15 pp. ED 086 366.

Age Differences, Behavior Development, *Day Care Programs, *Infants, Observation, *Social Behavior, Social Development

Elardo, Richard. *The ecology of infant day care.* 1973, 29 pp. ED 082 827.

Behavior Change, *Child Care Workers, *Child Development, Classroom Arrangement, *Day Care Programs, Discipline, *Environmental Influences, *Infants, Language Development, Mental Development, Motor Development, Safety, Scheduling, Social Development, Teacher Behavior

Ellis, Katherine and Petchesky, Rosalind. The politics of day care. *Social Policy,* November-December 1973, 3(4 and 5), 14-22.

*Child Care, *Child Development, *Day Care Programs, *Day Care Services, Economic Factors, Low Income, *Political Issues, Social Services, Working Women (Working Mothers)

Feeney, Stephanie. Early childhood development: Child-care debate: Key questions. An interview. *Compact*, July-August 1973, 25-26.

*Basic Skills, *Childhood Needs, *Day Care Programs, *Early Childhood Education, Preschool Education, *Preschool Programs, Question Answer Interviews, Reading Ability

Fenichel, Carl *et al.* New resources for severely disturbed young children and their parents. *Phi Delta Kappan*, April 1974, 55(8), 548-549.

*Day Care Programs, *Economically Disadvantaged, *Emotionally Disturbed Children, *Mentally Handicapped, Parent Counseling, *Special Education

Fesler, Wendy. Family day care homes in Humboldt County. *Children Today*, January-February 1973, 2(1), 7-9.

Attendant Training, Children, *Day Care Programs, *Day Care Services, *Family Life, Human Services, Local Government

Gross, Dorothy W. But where are the children? *Childhood Education*, May 1973, 49(8), 441-443.

*Day Care Programs, *Early Childhood Education, Preschool Programs, *Social Change

Guggenheimer, Elinor C. When mothers work: The battle for day care. *Nation*, May 7, 1973, 216(19), 594-597.

*Day Care Programs, *Day Care Services, Disadvantaged Youth, *Federal Government, *Political Issues, Poverty Programs, *Public Policy, *United States History, Working Parents

Hammontree, Janice L. and Monkman, John A. Development of summer day camps for the mentally retarded in a rural community. *Journal of Health Physical Education Recreation*, May 1973, 44(5), 59-62.

*Day Camp Programs, *Mentally Handicapped, Mental Retardation, *Rural Education

_____ Happiness is 0 to 6 and 7 to 5: Coosa Valley's Child Development Program. *Appalachia*, December 1973/January 1974, 7(3), 13-17.

*Child Development Centers, *Child Rearing, Community Involvement, *Day Care Programs, *Day Care Services, Homebound Children, Homebound Teachers, Program Descriptions, *Rural Youth

Hart, Annie L., *et al. Day care facts.* 1973, 20 pp. ED 075 631.

*Child Care, *Day Care Programs, Day Care Services, Federal Aid, Federal Programs, *Program Descriptions, *Working Women

Highberger, Ruth and Teets, Sharon. Early schooling: Why not? A reply to Raymond Moore and Dennis Moore. *Young Children,* January 1974, 29(2), 66-77.

*Childhood Needs, *Day Care Services, Debate, *Early Childhood Education, *Early Experience, Educational Research, *Environmental Influences, Parent Child Relationship (Attachment Behavior), Program Effectiveness

_____ The Homebound Program. *Appalachia,* December 1973/January 1974, 7(3), 18-25.

Child Rearing, *Day Care Services, *Homebound Children, *Home Programs, *Homebound Teachers, Photographs, *Rural Youth

Honig, Alice S. and Lally, J. Ronald. *Assessing teacher behavior with infants in day care.* 1973, 21 pp. ED 075 505.

Behavior Patterns, Classroom Observation Techniques, *Day Care Programs, *Educational Environment, Evaluation Techniques, Formative Evaluation, *Infants, Interaction, Process Analysis, *Low Income Groups, Objectives, Rating Scales, *Teacher Behavior

Howard, Norma (Comp.) *Day care: An abstract bibliography (Supplement #1).* Urbana, Illinois: ERIC Clearinghouse on Early Childhood Education, October 1972. 59 pp., $1.00. Order Catalog No. 1300-33 from Publications Office/IREC, 805 West Pennsylvania Avenue, Urbana, Illinois 61801.

Howard, Norma (Comp.) *Day Care: An abstract bibliography (Supplement #2).* Urbana, Illinois: ERIC Clearinghouse on Early Childhood Education, May 1974. 54 pp., $1.50. Order Catalog #107 from Publications Office/IREC, 805 West Pennsylvania Avenue, Urbana, Illinois 61801.

Hunter, Madeline. Public education for four-year olds: "To be or not to be." *Childhood Education,* May 1973, 49(8), 403-407.

*Day Care Services, *Early Childhood Education, Educational Objectives, Federal Programs, Individual Development, Learning Experience, Parent Participation, *Program Development, *Readiness, School Environment

Institute for Behavioural Research, York University, Downsview, Ontario, Canada. *Report on the Atkinson College child care planning survey*. 1973, 33 pp. ED 078 944.

*Child Care, College Students, *Day Care Services, *Institutional Research, Program Planning, Questionnaires, *Student Needs, Surveys

Kagan, Jerome and Kearsley, Richard. *Effects of day care on early child development*. Progress report. 1973, 83 pp. ED 081 492.

Affective Behavior, Caucasians, *Child Development, Chinese Americans, Cognitive Development, *Comparative Analysis, *Day Care Programs, Lower Class, Middle Class, *Multilingualism, *Preschool Tests, Social Development, Spanish Americans

Klein, Jenny W. Symposium: 1. CDA: The child development associate. *Childhood Education*, March 1973, 49(6), 288-291.

Child Development, *Child Development Specialists, Day Care Programs, *Day Care Services, *Early Childhood Education, *Preschool Education, Preschool Teachers, Professional Training

Krim, Alaine S. Families in crisis. *Children Today*, January-February 1974, 3(1), 2-6 and 36.

Cooperative Programs, *Day Care Services, Emergency Programs, *Family Problems, Parent Counseling, Psychiatric Services, *Relocation, *Social Services

Larson, John C. *Extended day-care attendance and first grade school performance*. 1973, 23 pp. ED 078 947.

*Academic Achievement, *Child Development, *Day Care Programs, Grade 1, Parental Background, *Performance Tests, *Psychological Studies, Speeches, Statistical Analysis, Teacher Attitudes

Lay, Margaret Z. and Meyer, William J *Teacher/child behaviors in an open environment day care program*. Final report. 1973, 103 pp. ED 083 294.

*Behavioral Objectives, Comparative Statistics, *Day Care Programs, *Early Childhood Education, Graphs, *Observation, *Statistical Analysis, Technical Reports

Lee, John R. *et al.* Classroom strategies. *Law in American Society*, February 1973, 2(1), 37-42.

*Case Studies, *Educational Strategies, *Law in American Society Project, *Law Instruction, Resource Guides, Teaching Guides, *Teaching Techniques

Lord, Catherine and Watkins, Renee N. (Translators). *Storefront day care centers: The radical Berlin experiment.* Boston: Beacon Press, 1973, 177 pp. Available from: Beacon Press, 25 Beacon Street, Boston, Massachusetts 02108. $9.95.

Child Care Centers, Child Rearing, Community Control, Community Service Programs, Culture Conflict, *Day Care Services, Early Childhood Education, Educational Innovation, *Feminism, *Nonauthoritarian Classes, Parent Attitudes, Permissive Environment, *Political Attitudes, Power Structure, *Social Values

McCord, Ivalee. Child care center: A boon for campus mothers. *Journal of Home Economics,* April 1973, 65(4), 26-28.

Child Care, *Child Care Centers, *Child Development, *Day Care Services, *Demonstration Programs, Infants, Preschool Children

Marcus, Joseph (Ed.) *Growing up in groups: The Russian day care center and the Israeli kibbutz.* 1972, 295 pp. ED 085 094.

*Child Care Workers, Child Development, *Day Care Programs, *Early Childhood, Educational Methods, *Foreign Culture, Groups, Learning Activities, *Manuals, Play

Massachusetts State Office for Children, Boston. *The Office for Children: A new approach to the development of children's services in Massachusetts.* 1973, 7 pp. ED 078 894.

Certification, *Child Care, *Child Welfare, Community Service Programs, *Day Care Services, *State Agencies, State Legislation, State Standards, *Statewide Planning

Mattick, Ilse. Issues in day care. *Theory into Practice,* April 1973, 12(2), 98-107.

*Childhood Needs, *Day Care Services, Early Childhood Education, *Early Experience, Financial Support, Learning Experience, Parent Participation, Political Influences, *Staff Role, Teacher Qualifications

Mattick, Ilse and Perkins, Frances J. *Guidelines for observation and assessment: An approach to evaluating the learning environment of a day care center.* 1973, 65 pp. ED 080 172.

Child Care Centers, *Day Care Programs, Day Care Services, Educational Environment, *Guides, *Observation, Peer Relationship, Physical Environment, Preschool Education, Program Content, *Program Evaluation, Student Teacher Relationship

New York State Education Department, Albany. Bureau of Child Development and Parent Education. *Prekindergarten day care is school—plus.* 1973, 79 pp. ED 085 096.

After School Programs, Child Care Workers, Community Involvement, *Day Care Programs, *Day Care Services, Guides, *Parent Participation, Physical Environment, *Program Administration, Program Coordination, Program Planning, *School Services, Staff Utilization

Pacific Oaks College, Pasadena, California. *Community family day care project.* Final report. 1973, 105 pp. ED 078 960.

*Child Care Workers, *Community Programs, *Costs, *Day Care Programs, *Family Environment, Mothers, Program Descriptions

Philadelphia School District, Pennsylvania. *Get Set Day Care Program.* 1972, 16 pp. ED 088 561.

*Academic Achievement, *Day Care Programs, *Kindergarten, Mathematics, Preschool Learning, *Program Evaluation, Reading Readiness, *Teacher Attitudes

Prescott, Elizabeth. *A comparison of three types of day care and nursery school-home care.* 1973, 11 pp. ED 078 910.

Behavior Patterns, *Child Care, Child Development, *Comparative Analysis, *Day Care Programs, *Nursery Schools, Observation, Preschool Education, Self Directed Classrooms, Technical Reports

Prescott, Elizabeth *et al. Who thrives in group day care? Assessment of child-rearing environments: An ecological approach.* Part 2 of final report. 1973, 132 pp. ED 076 229.

*Behavior Patterns, Behavior Rating Scales, *Day Care Services, *Observation, *Preschool Children, Preschool Education, Social Behavior, *Success Factors, Technical Reports

Radke, Mary Ann. *Curriculum guide for day care primary.* 1972, 28 pp. ED 087 519.

Activities, *Curriculum Guides, *Day Care Programs, Language Arts, Lesson Plans, Physical Development, *Preschool Curriculum, Psychomotor Skills, *Retarded Children, Self Concept, Teaching Methods

Reif, Nadine. *An annotated bibliography of day care reference materials.* April 1972, 42 pp. ED 088 609.

*Bibliographies, *Day Care Services, *Early Childhood Education, *Reference Materials

Rinaldo, Donna J. *et al.* Education teams with industry. *Childhood Education,* January 1974, 50(3), 139-142.

Compensatory Education Programs, *Cooperative Programs, *Day Care Programs, *Disadvantaged Youth, *Early Childhood, Industry, Poverty Programs, *School Industry Relationship, Shared Services

Rosenbluth, Lucille *et al. New York City day care study.* November 1973, 10 pp. ED 084 015.

Cognitive Development, *Day Care Programs, *Early Experience, Emotional Development, *Environmental Influences, *Infants, Interagency Cooperation, *Longitudinal Studies, Parent Child Relationship, Physical Development, Social Development

Rothman, Sheila M. Liberating day care: A modest proposal. *Phi Delta Kappan,* October 1973, 55(2), 132-135.

*Day Care Services, Employment, *Employment Opportunities, *Equal Opportunities (Jobs), Feminism, Labor Force, *Sex Discrimination, *Working Women

Rothman, Sheila M. Other people's children: The day care experience in America. *Public Interest,* Winter 1973, No. 30, 11-27.

Child Welfare, *Day Care Services, *History, *Parent Participation, Preschool Education, *Social Change, *Social Values

Sibbison, Virginia *et al.* (Comps.) *Pennsylvania day care consultants.* April 1972, 55 pp. ED 088 610.

Administrative Personnel, Community Involvement, *Consultants, *Day Care Services, *Early Childhood Education, Family Involvement, Health Services, Nutrition, Parent Education, *Professional Personnel, *Professional Services

Siedman, Eileen. *Day care in Vermont* (Excerpts from the introduction and the executive summary). 1973, 17 pp. ED 078 956. Also available from Day Care and Child Development Council of America, 1012 - 14th Street, N.W., Washington, D. C. 20005. $0.75.

Bulletins, *Child Care, *Day Care Programs, *Program Evaluation, *State Licensing Boards, *Statewide Planning, Systems Analysis

Smith, Audrey D. and Herberg, Dorothy. *Child care in the work incentive program.* July 1972, 137 pp. ED 086 312.

*Child Care, *Day Care Services, Family Problems, Labor Force, Mother Attitudes, *Parent Attitudes, Parent School Relationship, Policy Formation, *Welfare Services, Work Attitudes, Working Parents, *Working Women

Smith, Audrey D. and Reid, William J. Child care arrangements of AFDC mothers in the Work Incentive Program. *Child Welfare,* December 1973, 52(10), 651-661.

Aid to Families of Dependent Children, Work Incentive Program, *Child Care *Day Care Services, Mother Attitudes, *Welfare Problems

Southern Regional Education Board, Atlanta, Georgia. Evaluating children's progress: A *rating scale for children in day care.* 1973, 53 pp. ED 078 949.

*Child Development, Cognitive Development, *Day Care Programs, Early Childhood, *Evaluation Techniques, Guides, Infants, *Measurement Instruments, Physical Development, *Rating Scales, Social Development

Steinfels, Margaret O'Brien. *Who's minding the children? The history and politics of day care in America.* 1973, 281 pp. ED 857 570.

Administrative Policy, Child Care, *Day Care Services, Educational Legislation, Educational Policy, *Guidelines, *History, Mother Attitudes, Parent Role, *Policy Formation, *Political Power, Socialization

Strober, Myra H. *Some thoughts on the economics of child care centers.* August 1972, 43 pp. ED 086 350.

Child Care Centers, Cost Effectiveness, *Day Care Services, *Educational Economics, *Educational Theories, Employees, Family Income, *Federal Aid, Financial Policy, Parent Attitudes, *Working Women

Sulby, Arnold B. *et al.* Family day care: The nutritional component. *Children Today,* May-June 1973, 2(3), 12-15.

*Associated Day Care Services, Inc., *Child Care, Child Development, Day Care Programs, *Day Care Services, Homemaking Skills, Nutrition, *Nutrition Instruction, *Parent Counseling, Photographs

Taylor, Theodore. *The next step in the struggle for comprehensive child care.* 1973, 10 pp. ED 076 252.

*Child Care, *Child Development, *Community Responsibility, *Day Care Services, Early Childhood, Government Role, Guides, *Social Problems

Trisdorfer, Alice *et al. Family day care mothers: What "they" want in training programs.* 1973, 7 pp. ED 071 745.

*Child Care Occupations, *Day Care Services, Discipline, *Educational Programs, Financial Needs, Interpersonal Relationship, *Mothers, Play, Problem Solving, Psychologists, Role Perception, *Training Objectives

Wagner, Marsden G. and Wagner, Mary. Day care for children: The European experience. *Les Carnets de l'enfance (Assignment Children)*, January-March 1973, No. 21, 76-81.

*Child Care, *Community Development, *Day Care Services (Denmark, Finland, Netherlands, Czechoslovakia), *Financial Support, Program Evaluation, *Social Welfare

Wallach, Lorraine B. and Piers, Maria. Family day care: The humanistic side. *Child Welfare*, July 1973, 52(7), 431-435.

*Child Care Workers, Child Welfare, *Day Care Services (Family Day Care), *Parent Role, Physical Environment, Safety

Wilks, Danny. "Save the children": Implications of day care. *Black Scholar*, May-June 1973, 4(8-9), 14-20.

Administration Attitudes, *Child Care, Child Rearing, *Child Welfare, *Day Care Programs, *Day Care Services, Federal Programs, Government Role, Work Attitudes

Woods, Thomas L. Social work consultation and student training in day care centers. *Child Welfare*, December 1973, 52(10), 663-668.

*Day Care Programs, Parent Education, *Preschool Education, Professional Education, *Social Workers

Yawkey, Thomas and Seefeldt, Carol. *Day care: Planning and implementing*. Washington, D. C.: American Association of Elementary-Kindergarten-Nursery Educators, 1973. Paperback, 28 pp., no price indicated. Available from the Asssociation, 1201 - 16th Street, N.W., Washington, D.C.

Young, Dennis R. Two steps toward rational day care. *Human Needs*, January 1973, 1(7), 8-11.

*Day Care Programs, Day Care Services, *Economic Factors, *Educational Demand, *Policy Formation, *Research Needs

Zamoff, Richard B. and Lyle, Jerolyn R. Who needs what kind of day care center. *Child Welfare*, June 1973, 52(6), 351-358.

*Day Care Programs, *Day Care Services, Educational Research, Information Needs, Preschool Children, *Program Development, *Public Policy, Working Women

If the following resources are not available in public libraries, they may be ordered from Day Care and Child Development Council of America (DCCDCA), 1012 - 14th Street, N.W., Washington, D. C. 20005.

Greenblatt, Bernard and Eberhard, Lois. *Children on campus: A survey of prekindergarten programs at institutions of higher learning in the United States.* Reprinted by DCCDCA, 1974. 116 pp. $3.00

Harrell, James and Pizzo, Peggy (Comps.) *Child care reprints IV: Employed mothers.* DCCDCA, 1974. 140 pp. $2.50.

McSpadden, Lucia Ann. *Developmental curriculum: A total approach.* Reprinted by DCCDCA, 1974. 85 pp. $2.00.

McSpadden, Lucia Ann. *Formative evaluation: Parents and staff working together to build a responsive environment.* Reprinted by DCCDCA, 1974. 69-page paper. $2.00.

Massachusetts 4-C. *Day care accounting: A people's guide and day care costs.* Reprinted by DCCDCA, 1974. 35 pp. $2.00.

Mattick, Ilse. *Makeshift won't do: A hard look at the issues of day care.* DCCDCA, 1974. 16-page paper. $0.75.

Morgan, Gwen G. *Alternatives for regulation of family day care homes for children.* DCCDCA, 1974. 65-page paper. $2.00.

Resources for Community Change (Ed.) *Demand for day care: An introduction for campus and community.* DCCDCA, 1974. 18-article booklet, 48 pp. $1.50.

Southeastern Day Care Project. *How to do day care: Some shared experiences.* DCCDCA, 1974. 140 pp. $3.50.

Steinfels, Margaret O'Brien. *Who's minding the children?* New York: Simon and Schuster, 1974. Paperback, 281 pp. $2.95.

University of Colorado Medical Center. *Realities and fantasies of industry-related child care.* Reprinted by DCCDCA, 1974. $2.00.

University of Colorado Medical Center. *A comprehensive coordinated child care system.* Reprinted by DCCDCA, 1974. 202-page report. $4.50.

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LONG-TERM RESEARCH

Note: The reports in this section concern research programs that are continuous.

33-AA-1 LONGITUDINAL STUDY OF CHILD GROWTH AND DEVELOPMENT

Investigator(s): Lester W. Sontag, M.D., Director Emeritus; and Frank Falkner, M.D., Director, Fels Research Institute for the Study of Human Development, 800 Livermore Street, Yellow Springs, Ohio 45387.
Purpose: To study adult personality, adjustment, and aging processes of subjects whose health, growth, personality development, and environment have been studied since birth.
Methods: The program included a study of the aging processes of the subjects' parents in relation to physical and biochemical measures made earlier. It will include studies of parental childrearing practices in the same families for two generations, constancy of autonomic response patterns to stress from childhood to young adulthood, and the relationship of response patterns to psychosomatic disorders in adulthood. Blood lipids in relation to body composition and change in composition will also be studied.
Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare.

33-AA-2 DEVELOPMENT OF BUDGETS FOR CLOTHING AND HOUSEHOLD TEXTILES

Investigator(s): Virginia Britton, Ph.D., Home Economist, Consumer and Food Economics Institute, Agricultural Research Service, U. S. Department of Agriculture, Federal Center Building No. 1, Hyattsville, Maryland 20782.
Purpose: To develop and update current household clothing budgets taking into account known physiological and sociopsychological needs, clothing habits, income and other resources of various population groups, and the prices and availability of clothing items.
Subjects: 12,000 children in 6,000 families with husband and wife and one to five children but with no other persons living in the home.
Methods: Data were gathered from the 1960-61 Survey of Consumer Expenditures by the Bureau of Labor Statistics and the U. S. Department of Agriculture. Budgets for children were computed using regression methods for three economic levels of the USDA food plans — economy, low cost, and moderate cost. Separate clothing budgets were computed for boys and girls categorized by age, region, and urbanization. Budgets will be published as total expenditures for children's clothing (updated to current price levels) and in garment equivalent units.
Findings: Budget costs for boys tended to equal comparable budgets for girls at the economy level. However, at higher budget levels, boys' costs were substantially less than girls' budgets. This was especially true for older children. Cost differences between clothing budget levels were substantially greater than between food plans, reflecting the greater elasticity of clothing expenditures. The majority of farm budgets and rural nonfarm budgets was about equal to the comparable urban budgets.
Duration: 1962-continuing.
Publications: Britton, Virginia. Clothing budgets for children from the USDA: Annual costs at three levels in four regions. *Home Economics Research Journal,* March 1973, 1(3), 173-184. (Reprints are available from Sales Office, American Home Economics Association, 2010 Massachusetts Avenue, N.W., Washington, D. C. 20036, $1.00.)

33-AA-3 CHILD HEALTH AND DEVELOPMENT STUDIES

Investigator(s): Jacob Yerushalmy, Ph.D., Professor of Biostatistics, School of Public Health, University of California at Berkeley, Berkeley, California 94720; Stephen Thomas, M.D., Director, Department of Obstetrics and Gynecology; and Edgar Schoen, M.D., Director, Department of Pediatrics, Kaiser Foundation Hospital, Oakland, California 94611.
Purpose: To investigate the relationship of parents' biologic, genetic, and environmental influences (including events during pregnancy, labor, and delivery) to the normal and abnormal development of offspring.
Subjects: Members of the Kaiser Foundation Health Plan (a prepaid medical care program) who reside in the San Francisco-East Bay area.
Methods: Expected byproducts of the investigation are the relationships of factors studied to (1) wasted pregnancies in the forms of early fetal death, perinatal mortality, infant and child mortality; and (2) estimates of the incidence of different types of abnormalities. The study is a prospective, longitudinal type involving both mother and child. Gravidas in the Department of Obstetrics and children in the Pediatric Department are observed, interviewed, and given laboratory examinations. Physicians' observations are systematized uniformly. Special efforts are made to obtain information on members of the study who do not return to the plan for medical care. Detailed growth curves for children, ages birth to 6, and estimates of illnesses and injuries in infancy and the preschool child will be derived on a longitudinal basis.
Duration: July 1959-indefinite.
Cooperating group(s): Permanente Medical Group; Kaiser Foundation Research Institute.
Publications: *Journal of Pediatrics,* August 1967, 71(2), 164-172; *Pediatrics,* 1967, 39, 940-941; *American Journal of Obstetrics and Gynecology,* February 15, 1964, 88(4), 505-518.

33-AA-4 THE BERKELEY, CALIFORNIA GROWTH STUDY

Investigator(s): Dorothy H. Eichorn, Ph.D., Research Psychologist, Institute of Human Development, University of California at Berkeley, Berkeley, California 94720.
Purpose: To study the mental and physical growth of normally healthy persons from birth to the present.
Subjects: 60 full-term, healthy newborns, born in Berkeley hospitals in 1928 to 1929 of white, English-speaking parents; and 140 offspring of these subjects, ages birth to 20, seen irregularly.
Methods: The same data, appropriate for age, were collected for the subjects and their offspring. Beginning in the first week of life, tests of mental and motor development, pediatric examinations, and interviews were conducted at frequent intervals during growth. At all visits, inquiries were made concerning current health and recent illnesses. Anthropometrics, body photographs, and skeletal X-rays were taken at most ages. Socioeconomic data were collected. Studies of the physical aspects of growth include analyses that compare health histories with physical growth and with skeletal maturation. Emotional and other personality variables are being studied for consistency, and in various interrelations with maternal behavior in infancy, birth histories, socioeconomic status, and intellectual and physical growth.
Duration: 1928-continuing.
Publications: *American Psychologist,* 1968, 23(1), 1-17; *Monograph of the Society for Research in Child Development,* 1963, 28; Bayer, Leona and Bayley, Nancy. *Growth diagnosis: Selected methods for interpreting and predicting physical development from one year to maturity.* Chicago: University of Chicago Press, 1959.

33-AA-5 GROWTH OF PSYCHOPHYSIOLOGICAL PATTERNS IN INFANCY

Investigator(s): Wagner H. Bridger, M.D., Associate Professor of Psychiatry; and Beverly Birns, Ph.D., Assistant Professor of Psychology, Albert Einstein College of Medicine, Yeshiva University, Bronx, New York 10461.

Purpose: To investigate the origins and course of development of individual differences in neonates.

Subjects: Normal, healthy, full-term babies, 2 to 5 days old, born at Bronx Municipal Hospital Center.

Methods: A neonatal behavioral profile, which was established in previous studies, will be used. The profile includes behavioral and heart rate ratings on excitation, soothing, feeding, sleep, and nonstimulus periods of observation. Neonates will be followed at ages 2 weeks, and 1, 2, 3, and 4 months to measure the stability of early appearing traits and their relation to later behaviors. Data will be analyzed with respect to stability of early appearing behaviors and the relationship between neonatal behavior and maternal and birth history.

Duration: 1966-continuing.

Cooperating group(s): National Institute of Mental Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: In Grant Newton and Seymour Levine (Eds.), *Early experience and behavior: Psychobiology of development.* Springfield, Illinois: Charles C. Thomas, 1968; *Psychosomatic Medicine,* 1966, 28, 316.

33-AA-6 LONGITUDINAL STUDY OF DENTOFACIAL SKELETAL, PHYSICAL GROWTH, AND NUTRITION OF CHILDREN

Investigator(s): Bhim S. Savara, D.M.D., M.S., Chairman, Child Study Clinic, Dental School, University of Oregon, Portland, Oregon 97201.

Purpose: To study the dentofacial growth of children, assessment and skeletal age related to facial growth, and variations in physique and its effect on dentofacial growth; and to determine heritable traits.

Subjects: 420 children, including 40 pairs of twins, ages 3 to 18. 300 children have been observed for more than 10 years.

Methods: Cephalograms, hand, wrist, and calf X-rays, intraoral X-rays, study casts, anthropometric measurements, and photographs are taken; and oral examinations are administered to the subjects. Children are examined every 6 months until they are 14 years old.

Duration: 1950-continuing.

Cooperating group(s): University of Oregon Dental School; National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: *Angle Orthodontist,* 1968, 38, 104-120; *American Journal of Orthodontics,* 1969, 55, 133-153; *American Journal of Physical Anthropology,* 1969, 30(2), 315-318; *Bulletin of the Academy of General Dentistry,* June 1969, 27-31; *Journal of Dentistry for Children,* November-December 1969, 1-4; *American Journal of Orthodontics,* 1970, 57(6), 561-572; *Journal of Dental Research,* 1970, 49(4), 885; *Advances in Oral Biology.* New York: Academic Press, Inc., 1970. Pp. 1-9; *Journal of the American Dental Association,* 1970, 81, 653-661; *Oral Health,* 1971, 61(10), 19-28; *American Journal of Orthodontics,* 1971, 59(5), 488-500; *Symposium on Close-Range Photogrammetry.* Urbana: University of Illinois, 1971. Pp. 365-369.

33-AA-7 NEW RADIOGRAPHIC STANDARDS OF REFERENCE FOR SKELETAL DEVELOPMENT OF CHILDREN AND STANDARDS IN PREPARATION

Investigator(s): S. Idell Pyle, Ph.D., Research Associate in Anatomy, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106; William W. Greulich, Ph.D., Research Biologist, National Institute of Child Health and Human Development, Bethesda, Maryland 20014; and staff of the National Center for Health Statistics involved in the National Health Survey, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C. 20201.

Purpose: To develop radiographic standards of reference for skeletal development of children to provide a basis for identifying maturity levels of growing bones in the hands, elbows, shoulders, hips, knees, and feet of children and youths according to the shapes of the bone shadows in an X-ray film.

Subjects: Approximately 1,000 healthy individuals in Cleveland and Boston.

Methods: The bone shadows in an X-ray film display a modal rate of growth of each bone by illustrating regularly occurring osseous features which develop in series in the surface of the bone cortex as it calcifies. A reference standard consists of films arranged as a series to show sequential osseous features which are alike in males and females. It is an instrument for measuring the skeletal maturity level of children. Films of the subjects, covering the full span of growth from birth to adulthood, have been used to prepare standards. A standard of reference for joints in the upper extremity is in preparation, with the section on the hand and wrist showing the application of cardinal maturity indicators of individual bones to handwrist bones which are anomalous in the number of their bone growth centers. For published standards, see Publications below.

Cooperating group(s): Bolton-Brush Growth Study Center, Case Western Reserve University, Cleveland; Department of Maternal and Child Health, Harvard University School of Public Health, Boston; National Center for Health Statistics, Rockville, Maryland; Departments of Pediatrics and Endocrinology, Henry Ford Hospital, Detroit; Merrill-Palmer Institute, Detroit; Department of Education, Eastern Michigan University, Ypsilanti.

Publications: Greulich, W. W. and Pyle, S. I. *A radiographic atlas of skeletal development of the hand and wrist.* (2nd ed.) Stanford, California: Stanford University Press, 1959; Hoerr, N. L.; Pyle, S. I.; and Francis, C. C. *A radiographic atlas of skeletal development of the foot and ankle.* (1st ed.) Springfield, Illinois: Charles C. Thomas, 1962; Pyle, S. I. and Hoerr, N. L. *A standard of reference for the growing knee.* (2nd ed.) Springfield, Illinois: Charles C. Thomas, 1969; Pyle, S. I.; Waterhouse, A. M.; and Greulich, W. W. *A standard of reference for the growing hand and wrist.* (1st ed.) Cleveland: The Press of Case Western Reserve University, 1971.

33-AA-8 METHODS IN CHARACTER DEVELOPMENT

Investigator(s): Ernest M. Ligon, Ph.D., Director; and staff, Union College Character Research Project, 10 Nott Terrace, Schenectady, New York 12308.

Purpose: To develop more effective methods in character development in cooperation with families and character training agencies. (Character is defined in terms of three dimensions: philosophy of values, breadth of social vision, and strength of purpose.)

Subjects: Children and families throughout the United States. The families belong to churches, YMCAs, and schools but participate in the study as individual families.

Methods: Procedures of the research are based on action research, in which the participants cooperate with the laboratory and use methods of coscientist research. Open-ended reports on research goals constitute the basic body of research data. An analysis

of these data serves as the basis for the development of new procedures and for the scientific reports that are published concerning it.

Findings: Reports have been prepared concerning hypotheses tested in the home and character building agencies. Most of the findings relate to the home, learning, decision making, and methods for character development, plus descriptions of age level potentials, especially for decision making.

Duration: 1935-continuing.

Cooperating group(s): Lilly Endowment, Inc.

Publications: Catalog: *Attitude Education and Character Development*, which lists 44 publications and includes a price list, is available from the investigator.

33-AA-9 LONGITUDINAL GROWTH STUDIES OF CHILDREN WITH CRANIOFACIAL BIRTH DEFECTS

Investigator(s): Samuel Pruzansky, D.D.S., Director, Center for Craniofacial Anomalies, Medical Center, University of Illinois, P.O. Box 6998, Chicago, Illinois 60680.

Purpose: To study the epidemiology, genetics, morphology, physiology, and postnatal development; and to plot the natural history of children with craniofacial birth defects.

Subjects: Over 3,000 subjects, males and females, from infancy to adulthood.

Methods: The subjects were initially studied as infants. Procedures included roentgenocephalometry, tomography, dental casts, and photographs. Speech and hearing, psychosocial, and pediatric evaluations supplied additional information.

Findings: Patterns of growth have been delineated that are useful in clinical management. Some conditions have been shown to get worse; some show spontaneous improvement; and others remain unchanged. Syndrome-specific cranial morphologies have been described and genetic significance has been described.

Cooperating group(s): Illinois State Pediatric Institute; Division of Services for Crippled Children, University of Illinois; Cook County Children's Hospital; Division of Research, Maternal and Child Health Services, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare; National Institute of Dental Research, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: *Cleft Palate Journal*, 1971, 8, 239. A list of articles in journals of dentistry, medicine, public health, speech and hearing, and psychology is available from the investigator.

33-AA-10 YOUTH REPORTS

Investigator(s): Cecelia E. Sudia, M.A., Research and Evaluation Division, Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare, P.O. Box 1182, Washington, D.C. 20013.

Purpose: To collect and analyze opinions and values of high school age youths.

Subjects: 250 high school students.

Methods: Students were randomly chosen from youth enrolled in college preparatory courses in high schools selected to cover urban and suburban schools in each of 12 metropolitan areas in the United States. Each student was sent a set of short, open-ended questions and asked to report on the range of opinions in his school or neighborhood group. It is anticipated that the panel will be interviewed in this way two to three times a year. Replies are coded for content; analysis is both quantitative and qualitative.

Findings: The method of mail interview is successful with this group of students, and qualitative reports of opinion add considerable depth and range, as compared to typical polls of student opinions.
Duration: Spring 1969-continuing.
Publications: Teenagers discuss the "generation gap." *Youth Reports No. 1,* U.S. Department of Health, Education, and Welfare, 1969; Youth reporters discuss "problem drugs." *Youth Reports No. 2,* U.S. Department of Health, Education, and Welfare, 1970; Youth reporters discuss legal age restrictions. *Youth Reports No. 3,* U.S. Department of Health, Education, and Welfare, 1971.

33-AA-11 NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

Investigator(s): J. S. Ahmann, Ph.D., Director, Education Commission of the States, 700 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203.
Purpose: To make available the first comprehensive data on educational attainments of young Americans; and to measure any growth or decline which takes place in selected aspects of their attainments in certain subject areas.
Subjects: Approximately 80,000 to 100,000 subjects each year obtained by using random sampling procedures. Subjects represent four age groups: 9, 13, 17, and 26 to 35.
Methods: National Assessment of Educational Progress is an annual national survey of the knowledge, skills, understandings and attitudes of certain groups of young Americans. Students in school are assessed in small groups of up to 12, or in some cases, in individual interviews. Paper and pencil questions, discussions, and actual tasks to perform are included among the exercises. Adults are interviewed individually at home, and 17-year olds who are out of school also respond to exercises individually. Results are reported for about 50 percent of the exercises given each year, and are stated in percentages of people responding correctly or incorrectly. Results are reported nationally and for geographic region, size and type of community, sex, color, and parental education.
Duration: 1969-1980.
Cooperating group(s): National Center for Educational Statistics, U. S. Office of Education, U. S. Department of Health, Education, and Welfare; Carnegie Corporation, New York; Ford Foundation's Fund for the Advancement of Education.
Publications: National Assessment Publications List is available from Education Commission of the States, 300 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203.

33-AA-12 LONGITUDINAL GROWTH STUDY OF GUATEMALAN CHILDREN OF DIFFERENT RACIAL HISTORIES AND SOCIOECONOMIC BACKGROUNDS

Investigator(s): Francis E. Johnston, Ph.D., Professor, Department of Anthropology; Robert M. Malina, Ph.D., Associate Professor, University of Texas, Austin, Texas 78712; and Robert MacVean, Ed.D., Vice-Rector, Universidad del Valle de Guatemala; and Director, American School, Guatemala City, Guatemala.
Purpose: To study the interrelationships between growth measurements and performance measurements in a longitudinal sample of Guatemalan children of different genetic and socioeconomic backgrounds.
Subjects: Approximately 2,000 male and female students, ages 6 to 16, enrolled in two public and two private schools in Guatemala City are examined each year. Children are of Guatemalan, European, and North American backgrounds.

Methods: Subjects are examined each spring. Data gathered include anthropometric measurements, hand-wrist X-rays, results of intelligence and performance tests, and medical examination records. Cross-sectional and longitudinal analyses of data will be performed.

Duration: 1953-1975.

Cooperating group(s): American School, Guatemala City; Universidad del Valle de Guatemala; University of Texas, Austin.

33-AA-13 PROGNOSTIC VALUE OF NEONATAL BEHAVIORAL ASSESSMENTS

Investigator(s): Judy F. Rosenblith, Ph.D., Professor of Psychology, Wheaton College, Norton, Massachusetts 02766; and Associate Member, Institute of Life Sciences, Brown University, Box 1910, Providence, Rhode Island 02912.

Purpose: To determine if standardized behavioral assessment of newborns can be used to identify a population at risk to later neurologically based developmental dysfunction.

Subjects: Approximately 1,750 newborns, 1,550 of whom participate in the Providence Collaborative Perinatal Research Project.

Methods: The Rosenblith modification of the Graham Scale, a behavioral assessment, was used to determine the neurological, muscular, and sensory status of the newborns. Prognostic value of this scale is determined by relating it to criteria obtained in the follow-up assessments of the Collaborative Perinatal Research Project. Replications of the original study based on 400 infants total almost four. Data are now complete through the fourth year psychological examination.

Findings: Newborn measures are related to development at 8 months of age. Specific newborn signs are prognostic of later dysfunction: hypersensitivity to light is indicative of severe neurological damage; unusual patterns of muscle tonicity are related to varying degrees of developmental problems. The newborn assessments could be routinely adapted by hospitals: the equipment costs less than $10; the time required for assessment is less than a 1/2 hour; and the examination procedure can be taught to paraprofessional personnel.

Duration: January 1958-September 1975.

Cooperating group(s): Providence Lying-In Hospital; Child Development Study and Institute of Life Sciences, Brown University.

Publications: *Biologia Neonatorium,* 1970, 15, 217-228; *American Academy of Ophthalmology and Otolaryngology. Transactions,* 1970, 74, 1215-1228; Dubois-Poolsen, Lairy, and Remond (Eds.) La fonction du regard. *Colloque,* 1971, 215-224 (published by Institut National de la Sante et de la Recherche Medicale, Paris).

33-AA-14 COLLABORATIVE STUDIES IN CEREBRAL PALSY AND OTHER NEUROLOGICAL AND SENSORY DISORDERS OF INFANCY AND CHILDHOOD

Investigator(s): Heinz W. Berendes, M.D., National Institute of Neurological Diseases and Stroke, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.

Purpose: To investigate factors and conditions that affect parents: (1) conditions of pregnancy; e.g., infections, trauma, bleeding, drugs, and progress of labor; (2) environmental factors that influence the mother; e.g., social and economic conditions, emotional stress, and medical care; (3) biological factors in parents; e.g., age, parity, medical and

reproductive history, and immunologic characteristics; and (4) the genetic background of the parents. To investigate in the offspring: disorders of the nervous system at the time of delivery or disorders that appear during infancy or early childhood, including cerebral palsy, mental subnormality, and behavioral disorders.

Subjects: Approximately 8,000 live births a year from collaborating institutions for 6 years. Offspring are followed until 8 years of age.

Methods: A detailed investigation of the independent variables will be directed towards the reevaluation of the effect of factors already suspected, clarification of the way in which these factors are operative, and the discovery of new factors. Information, from women studied during pregnancy and from their offspring throughout infancy and early childhood, will be collected and analyzed in a uniform way in a number of medical centers throughout the country. Intensive study is made of a limited number of cases; less intensive studies are conducted for as many damaged children and abnormal pregnancies as possible.

Duration: 1956-continuing.

Cooperating group(s): Charity Hospital, New Orleans, Louisiana; Johns Hopkins University, School of Medicine, Baltimore, Maryland; Boston Lying-In Hospital, Children's Medical Center, and Harvard University (Warren Anatomical Museum), Boston, Massachusetts; University of Minnesota Medical School, Minneapolis, Minnesota; Columbia-Presbyterian Medical Center, New York, New York; Children's Hospital of Buffalo, Buffalo, New York; University of Oregon Medical School, Portland, Oregon; Children's Hospital of Philadelphia and Pennsylvania Hospital, Philadelphia, Pennsylvania; Brown University, Providence, Rhode Island; University of Tennessee Medical School, Memphis, Tennessee; Medical College of Virginia, Richmond, Virginia.

Publications: Chipman, S.S.; Lilienfeld, A.M.; and Donnelly, J.F. (Eds.) *Research methodology and needs in perinatal studies.* Springfield, Illinois: Charles C. Thomas, 1966. Chapters 5 and 6. A bibliography is available from the investigator.

33-AA-15 STUDY OF PERSONALITY ORIENTED DEVELOPMENT BY THE TWIN INTRAPAIR COMPARISON METHOD

Investigator(s): William Pollin, M.D., Chief; Donald Cohen, M.D., Clinical Associate; and Eleanor Dibble, Research Social Worker, Section on Twin and Sibling Studies, Adult Psychiatry Branch, National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.

Purpose: To understand the contributions of genetic, constitutional, and environmental factors to social, emotional, and cognitive development during the first years of life; specifically, to explicate the factors that underlie the emergence of individuality, using twins and triplets as subjects.

Subjects: Twins and triplets, from the prenatal period through elementary school age.

Methods: The central methodological principle emphasizes the effort to define precisely developmental difference within infant and childhood MZ twin pairs, and then search for the determinants of such differences. In the longitudinal study, parents are interviewed as soon as the diagnosis of a twin pregnancy is made. Neurological, pediatric, and developmental assessments are performed at birth and at 3- to 6-month intervals during the first years of life. The parents are interviewed at the same intervals about the children's development and family history. In the preschool period, the children receive standardized psychological testing, are observed in a standardized nursery school setting, and are administered projective psychological testing. Children and families are visited at home and also seen in structured office settings. In cross-sectional studies,

children are seen for developmental evaluation, psychological assessment, and observations of free play, and their parents are interviewed. The value of questionnaire techniques is being investigated. A general research question relates to the way in which constitutional differences in the children elicit different types of parenting, and the ways in which differential parental behavior shapes the emergence of personality differences in the children.
Duration: 1967-1980.

33-AA-16 PREVENTIVELY ORIENTED SCHOOL MENTAL HEALTH PROGRAMS

Investigator(s): Emory L. Cowen, Ph.D., Professor, Department of Psychology, and Director; D. A. Dorr, Ph.D., Research Coordinator; L. D. Izzo, M.A., Chief Psychologist; and M.A. Trost, M.A., Chief Social Worker, Primary Mental Health Project, University of Rochester, River Campus Station, Rochester, New York 14627.
Purpose: To detect and prevent school maladaptation.
Subjects: 7,500 school children including 4,500 primary children in 11 preventively oriented school mental health programs.
Methods: Current research which originated in 1958 (see *Research Relating to Children,* Study 19-SS-7), includes 23 studies on training nonprofessionals, evaluation of programs, process analyses, selection-process relations, selection-outcome relations, and process-outcome relations. Between 20 and 30 different research instruments and assessment procedures are being used.
Duration: February 1969-continuing.
Cooperating group(s): University of Rochester.

33-AA-17 LANGUAGE ACQUISITION IN THE CONTEXT OF THE DEVELOPMENT OF BEHAVIOR AND INTERACTION

Investigator(s): Margaret Bullowa, M.D., Researcher, Speech Communication Group, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.
Purpose: To find the steps by which early stages of the child's language development take place.
Subjects: Four firstborn children from white, English-speaking, middle class families.
Methods: Each child was observed from birth for at least 30 months at home at weekly intervals. On each visit a half hour continuous record was made on tape and film. An observer using a shielded microphone dictated a simultaneous description of ongoing behavior and interaction to supplement the film taken by a robot camera. A timing signal was placed on the tape and film every 5 seconds. (The tape and film from an observation may be synchronized during playback in the laboratory.) In addition, an independent team that consisted of a pediatrician and a developmental psychologist visited each baby's home once a month to assess other aspects of maturation and development. Indexes to sound and transcripts were made from the tapes to permit rapid search. Tapes are analyzed by linguists interested in phonological, semantic and syntactic features. Synchronized tape and film is studied by linguists and by the principal investigator, who is interested in the communicative behavior of which the vocalization forms a part.
Findings: The most significant finding is the apparent obligatory relationship between the child's vocal sound production and actions with the same meaning in early *perfor-*

mative sentences. Such sentences are used by the child to communicate messages when he is showing something to someone, when he is greeting someone, etc. Another finding is the spontaneous appearance of sentences with topic-comment construction in the child's speech even though parents rarely use this construction. (The construction is not characteristic of adult American English.)

Duration: Pilot study, 1959-1965; present study, 1965-continuing.

Cooperating group(s): National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: *Journal of Child Psychiatry,* 1964, III(1), 53; *Monographs of the Society for Research in Child Development,* 1964, 29(1), 101-114; *Language and Speech,* 1964, 7(2), 107-111; *Quarterly Progress Report of the Research Laboratory of Electronics,* 1966, 81, 181-186; *Lingua,* 1967, 19(1), 1-59; *Foundations of Language,* 1967, 1, 37-65; Reibel, D. A. and Schane, S. A. (Eds.) *Modern studies in English.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969. Pp. 422-447; Bar-Adon, A. and Leopold, W. F. (Eds.) *Child language: A book of readings.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971; *Journal of the American Academy of Child Psychiatry,* 1971, 10(1), 124-135; *Quarterly Progress Report of the Research Laboratory of Electronics,* M.I.T., 1971, No. 100.

33-AA-18 THE HARVARD PRESCHOOL PROJECT

Investigator(s): Burton L. White, Ph.D., Director; Jean Watts, Ph.D., Co-director; and Barbara Kaban, M.A., The Harvard Preschool Project, Laboratory of Human Development, Graduate School of Education, Harvard University, 418 Larsen Hall, Appian Way, Cambridge, Massachusetts 02138.

Purpose: To trace the development of educability and competence in children during the first 6 years of life, and simultaneously to trace the role of experience in such development.

Subjects: Presently, 32 normal children, ages 12 to 32 months, of both sexes, half of whom were selected because they exhibited potentials to develop high degrees of general competence during the second and third years of life; while the other children seemed likely to develop a considerably lower level of competence.

Methods: The work in progress constitutes a longitudinal natural experiment. Data are collected by home observation and testing of the children on the average of 2 hours per week. One observational technique consists of tape recordings in which the observer describes the child's activities. The data are then coded onto forms using instruments developed for the project. Another technique involves a checklist record of behavior. Tests of language and cognitive development are administered regularly. Factors, including stream of experience, the child's competencies, and salient environmental influences, are measured.

Findings: Analysis of preliminary data indicates that the observation instruments are monitoring the development of competence in promising ways. Further indications of how childrearing practices influence the process are becoming clear. The mother or substitute, usually through indirect action, is seen as the major environmental influence on the development of competence. A longitudinal experiment will be initiated this year. (See *Research Relating to Children, Bulletin 22,* May-December 1967, Study 22-DA-3, p. 16.)

Duration: September 1965-continuing.

Cooperating group(s): U. S. Office of Economic Opportunity; Carnegie Corporation, New York; Head Start, Office of Child Development, U. S. Department of Health, Education, and Welfare.

33-AA-19 LEARNING OF INCENTIVE VALUE IN CHILDREN

Investigator(s): Jum C. Nunnally, Ph.D., Professor, Department of Psychology, Vanderbilt University, Nashville, Tennessee 37203.

Purpose: To study the learning of incentive value in children through the use of reward conditioning.

Subjects: Elementary school children, ages 7 to 11.

Methods: Neutral objects (usually nonsense syllables) are associated with receipt of reward, nonreward, and loss of reward in various types of research designs. The amounts and kinds of condition reward value are measured in relation to verbal evaluation, reward expectancy, choice behavior, and measures of selective attention.

Findings: Various consistent effects have been found on the dependent measures, and the research paradigms have been able to differentiate many treatment conditions concerned with secondary rewards.

Duration: 1963-continuing.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

Publications: Rileigh, K. K. and Nunnally, J. C. A new measure of semantic appraisal for studies of secondary rewards. *Psychonomic Science*, 1970, 18, 203-205; Wilson, W. H. and Nunnally, J. C. A naturalistic investigation of acquired meaning in children. *Psychonomic Science*, 1971, 23, 149-150.

33-AA-20 COLLABORATIVE PERINATAL RESEARCH PROJECT

Investigator(s): John A. Anderson, M.D., Ph.D., Professor and Head, Department of Pediatrics; and Robert O. Fisch, M.D., Project Director, Child Development Study, University of Minnesota, Box 487 Mayo Memorial, Minneapolis, Minnesota 55455.

Purpose: To develop public health measures for the prevention of pregnancy wastage and damaged children.

Subjects: Approximately 3,000 pregnant women and their newborns who will be followed from birth to age 8.

Methods: The following data will be collected from early pregnancy onward for the mother and child: history, physical examination, laboratory findings, labor and delivery, newborn observations, nursing, pediatric-neurological examinations, 4-month pediatric evaluation, 3-year speech and hearing examination, 4-year psychological examination, 7-year pediatric-neurological and psychological examination, and 8-year speech, language, and hearing examination.

Duration: January 1958-July 1974.

Cooperating group(s): National Institute of Neurological Diseases and Stroke, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; Boston Lying-In Hospital; Brown University, Providence; Charity Hospital, New Orleans; University of Buffalo; Children's Hospital, Phildalephia; Children's Medical Center, Boston; Columbia University, New York; Johns Hopkins University, Baltimore; Medical College, University of Virginia, Charlottesville; New York Medical College, New York; Pennsylvania Hospital, Philadelphia; University of Oregon Medical School, Portland; University of Tennessee College of Medicine, Memphis.

Publications: Results will be available from Dr. Joseph S. Drage, Acting Chief, Perinatal Research Branch, National Institutes of Health, Bethesda, Maryland 20014.

33-AA-21 CHILDHOOD PSYCHOSIS

Investigator(s): Rudolf Ekstein, Ph.D., Director, Childhood Psychosis Project; Seymour W. Friedman, M.D., Director, Clinical Services; Peter Landres, M.D., Staff Psychiatrist; Beatrice M. Cooper, M.A., Senior Research Social Worker; and Joel Liebowitz, Ph.D., Clinical Research Psychologist, Reiss-Davis Child Study Center, 9760 West Pico Boulevard, Los Angeles, California 90035.

Purpose: To develop better diagnostic and treatment methods for childhood psychosis; and to investigate psychoanalytic methods of treatment, the use of support systems, and work with parents, collaborating agencies, schools, and hospitals.

Subjects: 10 children, ages 5 to 20.

Methods: Data were gathered through tape recordings of psychotherapy sessions, therapists' summaries of sessions, and repeated psychological tests. The use of *distance* as a psychological mechanism will be investigated. (See *Research Relating to Children, Bulletin 18*, 1964, 58; and *Bulletin 20*, 1966, 72.)

Duration: 1957-continuing.

Publications: *Children of time and space, of action and impulse*. New York: Appleton-Century-Crofts, 1966; *The challenge: Despair and hope in the conquest of inner space*. New York: Brunner/Mazel, 1971; Ekstein, R. and Friedman, S. W. Do you have faith that I'll make it? *Reiss-Davis Clinic Bulletin*, 1971, 8(2); Rubin, K. The flawed hammer. *Reiss-Davis Clinic Bulletin*, 1971 8(2); Cooper, B. The flawed triangle. *Reiss-Davis Clinic Bulletin*, 1971, 8(2); Liebowitz, J. M. Transformation of the flaw — Reevaluation via psychological testing. *Reiss-Davis Clinic Bulletin*, 1971, 8(2); Ekstein, R. and Wax, D. Fusion and diffusion of memory and perception in childhood psychosis in relation to psychotherapeutic innovations. *Reiss-Davis Clinic Bulletin*, 1972, 9(2); Ekstein, R. Friedman, S.; and Caruth, E. The psychoanalytic treatment of childhood schizophrenia. In B. B. Wolman (Ed.) *Manual of child psychopathology*. New York: McGraw Hill, 1972. Pp. 1035-1057.

33-AA-22 A SURVEY OF THE NUTRITIONAL STATUS OF BRITISH SCHOOL CHILDREN

Investigator(s): Judith Cook, M.B., B. Chem., Lecturer; Douglas Altman, B.Sc., Lecturer; W. W. Holland, M.D., F.F.C.M., Professor; S. G. Topp, B.Sc., Dip. Stat., Lecturer, Department of Clinical Epidemiology and Social Medicine, School of Medicine, St. Thomas' Hospital, London, S.E.1, England; and A. Elliott, M.D., D.P.H., County Medical Officer, Kent County Council, Kent, England.

Purpose: To examine the dietary intake of school children and investigate its relationship to health and socioeconomic factors; and to explore the extent and nature of poor nutrition.

Subjects: 1,017 children, born between 1953 and 1955 or between 1958 and 1960, residing in and attending Local Authority schools in four areas in Kent, England. The sample was stratified by social class, family size, and weight. Higher sampling fractions were taken for children from four groups: children (1) from larger families, (2) from lower social classes, (3) with no fathers, and (4) with low weights; in order to have adequate numbers of subjects in those groups suspected of having the greatest likelihood of deficiency.

Methods: Field work for each child, conducted between September 1968 and March 1970, was comprised of a weighted diet record, a socioeconomic questionnaire, and a medical examination. The weighted diet record was kept for 1 week and was closely supervised by a trained field worker. The same field worker administered the socioeconomic questionnaire which elicited information on family structure, father's occupation, mother's education and working status, the child's health history and eating pattern, and the parents' heights. The medical examination, carried out by one of two medical officers, included a clinical assessment of the nutritional status of the child; measurements of height, weight, triceps and subscapular skinfold

thickness, arm circumference, and peak expiratory flow rate. The medical examination also noted clinical evidence of vitamin deficiency.

Duration: 1968-continuing.

Cooperating group(s): Department of Health and Social Security; St. Thomas' Hospital School of Medicine, London, England; Kent County Council, Kent, England.

Publications: Topp, S. G.; Cook, J.; and Elliott, A. Measurement of nutritional intake among school children. *British Journal of Preventive Social Medicine*, 1972, 26, 106; Cook, J.; Altman, D. G.; Moore, D. M. C.; Topp, S. G.; Holland, W. W.; and Elliott, A. A survey of the nutritional status of school children. Relation between nutrient intake and socioeconomic factors. *British Journal of Preventive Social Medicine*, 1973, 27, 91-99.

GROWTH AND DEVELOPMENT

General

33-BA-1 CONSTRUCTION OF AN INFANT AND PRESCHOOL CHILD DEVELOPMENT RECORD

Investigator(s): B. E. J. Burdon, M.A., Head, Department of Educational Psychology, Salisbury College of Advanced Education, Salisbury East, South Australia 5109; and G. R. Teasdale, Ph.D., Senior Lecturer, School of Social Sciences, The Flinders University of South Australia, Bedford Park, South Australia 5042.
Purpose: To construct an infant and preschool child development record for use by teachers, supervisors, and paraprofessional personnel in child care centers and preschool institutions as a check on normal development and as an indicator of the need for reference to a specialist for diagnosis or consultation.
Subjects: 300 boys and 300 girls, ages 3 months to 4 years.
Methods: Normative behaviors will be derived from the theories of Fowler, Piaget, Erikson, and Sutton Smith; and these normative behaviors will be verified by observation for a representative population sample. A trial form will be developed to establish validity and reliability. The record will be observational in nature.
Duration: January 1974-December 1975.
Cooperating group(s): Advisory Committee on Child Care Research, The Commonwealth Government of Australia.
Publications: Until published, data and results will be available from B. E. J. Burdon.

33-BA-2 DATA SYSTEM FOR PLANNING CHILDREN'S RESEARCH

Investigator(s): Ira H. Cisin, Ph.D., Director, Social Research Group, 2401 Virginia Avenue, N.W., Fourth Floor, Washington, D. C. 20037.
Purpose: To facilitate coordination among member agencies, through Interagency Panels on research and development in early childhood and adolescence; to maximize the utilization of research and development on behalf of the general well-being of children and youth; to explore the development of joint research efforts; and to develop explicit goals toward which agency activities will be directed.
Methods: The Social Research Group serves the needs of the Interagency Panels. These needs have been met through annual reports on federal research and development activities in early childhood and adolescence, state-of-the-art studies, special interest group reports, presentations at professional conferences, library research studies, implementation of conferences, and survey research concerning the viewpoints of members of the panels.
Findings: Early childhood and adolescent panel activities, which include meetings held approximately every 6 weeks, have increased interagency communication, promoted joint research funding, and provided a forum for continuing dialogue among the member agencies.
Duration: July 1971-June 1974.
Cooperating group(s): Membership of both Interagency Panels is comprised of 17 agencies or subdivisions of the U. S. Department of Health, Education, and Welfare; U. S. Department of Agriculture; Department of Labor; ACTION; Housing and Urban Development; Office of

Management and Budget. The Office of Child Development, U. S. Department of Health, Education, and Welfare, is the lead agency for the two Interagency Panels.

Publications: Copies of the following publications may be obtained from the Social Research Group, 2401 Virginia Avenue, N.W., Fourth Floor, Washington, D. C. 20037: *A report on child abuse with annotated bibliography,* 1973; *The family: Research considerations and concerns,* 1973; *Work experience as preparation for adulthood,* 1973; *Toward interagency coordination: An overview of federal research and development activities relating to early childhood,* 1973; *Toward interagency coordination: An overview of federal research and development activities relating to adolescence,* 1973.

Physical

33-CA-1 INTERACTIONS OF GROWTH AND MORBIDITY AMONG PRESCHOOL CHILDREN IN RURAL INDIA

Investigator(s): C. E. Taylor, M.D., Professor; C. DeSweemer, M.D., Assistant Professor; A. Kielmann, M.D., Research Associate; and W. Blot, Ph.D., Assistant Professor, Department of International Health, School of Hygiene and Public Health, Johns Hopkins University, 615 North Wolfe Street, Baltimore, Maryland 21206; and I. S. Uberoi, M.D., Medical Director, Rural Health Research Center, Narangwal, Ludhiana, Punjab, India.

Purpose: To study the effects of the interactions between infectious disease experience and nutrition on the growth, future morbidity, and mortality of preschool children in rural India; and to develop an optimal mix of health service inputs that are effective in improving growth and reducing overall morbidity and mortality in these children.

Subjects: 2,000 preschool children, ages birth to 3, in 10 villages of northern India.

Methods: The villages were divided into four groups on the basis of a 2 X 2 cell design with nutrition (education and supplementation) and infectious disease control as input variables. Longitudinal anthropometry, morbidity, and mortality were the principal dependent variables. Ongoing data collection consists of recording monthly weight and height, weekly morbidity rates, and regular and continuous vital statistics. All routine service inputs are provided by auxiliary personnel, who are also responsible for collection of all longitudinal data.

Findings: Undernutrition (weight below specified limits of a standard population) was common at ages above 1 year. Prevalence of past illnesses (from all causes and several specific causes) over observation periods of fixed lengths, significantly affected weight and height at most ages. Conversely, weight and height were often significant predictors of future morbidity, even after adjusting for the effect of illness prior to the time the weight and height were measured. Demographic, socioeconomic, and health care service intervention variables were of significant influence upon the growth-morbidity relationship. Growth (as expressed by weight gain and height) was better in nutrition villages. Service input had no effect on perinatal or neonatal death rates. Postneonatal (1 to 11 months) death rates were lower in those villages where infectious disease control was provided. One to 3-year mortality was unaffected in infectious disease control villages, but was somewhat reduced in nutrition villages only. In combined care villages, 1- to 3-year mortality was less than half as compared to control villages.

Duration: 1968-1974.

Cooperating group(s): Indian Council of Medical Research; World Health Organization; National Institute of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

33-CC-1 SELECTIVE LISTENING IN YOUNG INFANTS

Investigator(s): Paul J. Jensen, Ph.D., Associate Professor, Communication Sciences Laboratory, ASB 53; William N. Williams, Ph.D., Assistant Professor, Department of Basic Dental Sciences; and Kenneth R. Bzoch, Ph.D., Professor, Department of Communication Disorders, University of Florida, Gainesville, Florida 32611.
Purpose: To study selective listening as a receptive language process in early infancy.
Subjects: 12 to 15 normal infants, ages 2 to 8 weeks, approximately equal numbers of boys and girls.
Methods: A conjugate reinforcement paradigm is used in conjunction with a special purpose apparatus. Subjects are given selective control over a pair of auditory stimuli (speech versus nonspeech) by the way they suck non-nutritively. This process will be repeated 1 month after the first experimental sessions.
Duration: Fall 1973-September 1974.

33-CE-1 STUDIES IN THE PROTEIN METABOLISM OF HUMAN NEONATES

Investigator(s): Paul Pencharz, M.D., Department of Nutrition and Food Science, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.
Purpose: To determine rates of whole body protein synthesis and metabolism in neonates; and to determine how these rates are affected by food intake (protein and energy intakes), gestation, and time after birth.
Subjects: Six premature infants: four girls and two boys, birthweight 1,000 to 1,700 grams, ages 29 hours to 45 days; and one full-term boy, 44 hours old, weight 3,300 grams.
Methods: Mitrogen balance was carried out on each infant, N-15 enriched glycine was given to the babies mixed with their formula, fed orally. Urine was collected on a metabolic bed, and stools were collected separately in a plastic bag. The n-15 enrichment of urinary urea was determined using an isotope Ratio-Mass Spectrometer. Rates of whole body protein synthesis and catabolism were calculated using the Picou model.
Findings: The rate of protein synthesis is six times the level in the adult determined by use of the same (Picou) model. The net rate of protein synthesis is positively correlated with protein intake. The premature infant is able to conserve nitrogen efficiently by reducing urea production.
Duration: January 1973-June 1974.
Cooperating group(s): Boston Hospital for Women.

33-CE-2 INFLUENCE OF MATERNAL DIET ON OFFSPRING

Investigator(s): R. Quentin Blackwell, Ph.D., Chief, Biochemistry Laboratory NAMRU-2; Janet M. Hardy, M.D., Associate Professor; and S. C. Hsu, M.D. (Director, Joint Commission on Rural Reconstruction), Department of Biochemical and Biophysical Sciences, School of Hygiene and Public Health, Johns Hopkins University, 615 North Wolfe Street, Baltimore, Maryland 21205.
Purpose: To determine if dietary supplementation of marginally fed pregnant mothers will improve the physical and psychological health of their offspring.
Subjects: 200 farm women who have previously delivered a healthy child, are in good health as indicated by their hematoint, and whose diet consists mainly of sweet potatoes.
Methods: After the birth of their first child, half of the mothers were selected randomly and their diets were supplemented daily with a solution of protein, calories, vitamins, and minerals. The other half of the mothers received the same volume of liquid containing vitamins, minerals,

fewer calories, but no protein. The birthweights, nitrogen metabolism, and psychological tests were run on the first and second sets of children. In order to control for experimenter bias, a double blind method of data collection was used.

Findings: The babies of protein supplemented mothers weighed a little more than the controls (100g). The proportion of babies with birthweights less than 2,500 grams was seven percent in the controls and only one to two percent in babies of supplemented mothers. The babies of supplemented mothers surpassed the control babies in three specific tests of the Bayley Scales of Infant Development.

Duration: 1967-1976.

Cooperating group(s): United States Navy; Rockefeller Foundation; Republic of China; Joint Commission for Rural Reconstruction; Ambrose-Monel Foundation; United States Agency for International Development.

Publications: *Nutrition Reports International,* 1973, 7(5), 517.

33-CE-3 NUTRITIONAL STATUS OF CHILDREN CONSUMING COTTONSEED PROTEIN

Investigator(s): Betty B. Alford, Ph.D., Project Director, Human Nutrition Research, Box 23564, Texas Woman's University, Denton, Texas 76204.

Purpose: To evaluate the use of cottonseed protein in children's diets, including the nutritional value of the protein in cottonseed, and children's acceptance of foods containing cottonseed flour.

Subjects: 40 healthy boys and girls, ages 8 to 17.

Methods: Twenty of the children were fed a moderate protein diet containing cottonseed protein for 6 months, while the other 20 children were fed similar diets without cottonseed. Evaluation is based on growth and the biochemical analysis of blood and urine samples for protein, vitamins, and minerals. After waiting 6 months, the study will be repeated for an additional 6 months and will involve a higher total protein intake.

Findings: Cottonseed protein was well accepted by the children. There were no differences between the experimental and control groups.

Duration: June 1972-December 1975.

Cooperating group(s): Agricultural Research Service, U. S. Department of Agriculture; Natural Fibers and Food Protein Committee of Texas.

33-CF-1 A COMPARISON OF SELECTED CORTICAL LEVEL AND REFLEXIVE LEVEL NEUROMUSCULAR TRAINING PROGRAMS FOR ESTABLISHING NORMAL DEGLUTITION PATTERNS

Investigator(s): Mervyn L. Falk, Ph.D., Associate Professor, Department of Communication Disorders and Sciences, Wayne State University, 5900 Second Street, Detroit, Michigan 48202; and James Delaney, D.D.S., Chief, Department of Dentistry, Children's Hospital of Michigan, 5224 St. Antoine Street, Detroit, Michigan 48202.

Purpose: To determine whether the problem of tongue thrust is better resolved by therapy which is based on the conscious level or on reflexive level training.

Subjects: 20 boys and girls, ages 8 to 12, who demonstrate deviant anterior dental relationships and tongue thrust syndrome.

Methods: Two speech clinicians, skilled in the use of the methods advocated by Garliner and by Falk and associates, are each assigned five subjects being treated with each therapeutic approach. Serial dental models and cephalograms will be made at the onset, the third, and the sixth month of the training period and will be used to determine changes in anterior dental

relationships. Improved bite relationships are inferred to indicate successful training of a normal swallow pattern. Films and models made at 12 months will be used to examine for regression, as inferred from evidence of negative changes in dental relationships as compared to 6-month data. No other therapies will be allowed during the 12-month period. In addition, the data will be examined for changes by dental specialists unfamiliar with the subjects' training programs.

Duration: February 1974-February 1975.

Cooperating group(s): Department of Orthodontics, University Dental Center, Wayne State University, Detroit, Michigan; University of Detroit, Detroit, Michigan.

33-CF-2 SENSORY DEFICITS IN MALOCCLUSION CASES

Investigator(s): Richard Cole, Ph.D., Director, Dental Research; Timothy Clare, D.D.S., M.S.; Buford Suffridge, D.D.S., M.S.; Paul Melnich, D.D.S., M.S.; and Tom Sugg, D.D.S., M.S., Department of Orthodontics, Saint Louis University Medical Center, 3556 Caroline Street, Saint Louis, Missouri 63104.

Purpose: To determine whether an orofacial malformation, malocclusion, is related to oral sensory deficits; and to determine whether a correlation exists between the degree of oral sensory deficit and the degree of orofacial deformity, particularly malocclusion.

Subjects: 80 Angle Class II Division I subjects, ages 12 to 14, matched with 80 Angle Class I occlusion subjects, ages 12 to 14. Subjects did not have positive medical histories, physical abnormalities, or significant neurological problems.

Methods: Forty Class II Division I subjects and 40 Class I subjects were tested by the NIH 20 Stereognostic Test. Testing also included motor testing of tongue tip activity and motor and stereognostic sensory testing of digital skills. Twenty subjects in each group were tested in terms of their ability to discriminate differences in weights placed on the tongue and on the fingertips, while another 20 subjects were tested on their ability to distinguish the fine differences in texture of objects placed in the month.

Findings: There was a tendency for the Class II Division I subjects (particularly the more extreme cases) to present with sensory deficits when compared with the Class I occlusion subjects. Overall, the Class II Division I subjects scored slightly poorer on all tests than did the Class I subjects.

Duration: November 1972-June 1974.

33-CF-3 GROWTH AND DEVELOPMENT OF THE UPPER RESPIRATORY TRACT IN CHILDREN

Investigator(s): David Ross Dickson, Ph.D., Professor; and Wilma Maue Dickson, Ph.D., Assistant Professor, School of Dental Anatomy, University of Pittsburgh, Pittsburgh, Pennsylvania 15213.

Purpose: To study the growth and development of the upper respiratory tract in children with specific reference to the larynx, pharynx, palate, tongue, and craniofacial bones.

Subjects: Normal and abnormal boys and girls, ages prenatal through puberty.

Methods: Research methods used include the histologic study of differentially stained tissue sections, high precision measurements, reconstructions, and anatomical microdissections.

Findings: Analyzed data yielded the normal dimensions of the 12-week fetal larynx, newborn larynx, pre- and postpubertal larynx, and adult larynx. Descriptions of the normal and cleft palate, eustachian tube of the cleft child, and normal tongue morphology are in progress.

Duration: 1968-1974.

Cooperating group(s): Veterans Administration Hospital, San Francisco, California; Mercy Hospital, Pittsburgh, Pennsylvania; Eye and Ear Hospital, Pittsburgh, Pennsylvania.
Publications: Maue, W. M. and Dickson, D. R. Cartilages and ligaments of the adult human larynx. *Archives of Otolaryngology*, 1971, 94, 432-439; Dickson, D. R. and Dickson, W. M. Functional morphology of the human larynx. *Transactions of the Pennsylvania Academy of Ophthalmology and Otolaryngology*, 1972, 25, 29-38.

33-CG-1 TACTILE STIMULATION AND THE DEVELOPMENT OF LOW BIRTHWEIGHT NEONATES

Investigator(s): Norman Solkoff, Ph.D., Professor, Department of Psychiatry, State University of New York at Buffalo, Buffalo, New York 14215.
PURPOSE: To study the relationship between premature neonates' sensorially bland nursery environment and some of their subsequent deficits; to confirm previous findings on the beneficial effects of handling on neonates' weight; and to determine whether early tactile stimulation will result in improved behavioral and motor functioning.
Subjects: 11 low birthweight (mean, 1,365 grams) infants (mean gestational age, 31.33 weeks): 9 girls and 2 boys. No babies with respiratory distress, convulsions, symptomatic hypoglycemia, recurrent apnea, or billirubin serum levels above 15 mg. per 100 ml. were included in the study.
Methods: All infants occupied the same nursery in the Intensive Care Unit of Buffalo Children's Hospital and were cared for by the same nurses. In addition to the handling associated with routine nursery care, the experimental group infants (5 girls, 1 boy) were stroked for 7½ minutes each hour, 16 hours a day, for 10 days. The control group (3 girls, 2 boys) received only routine nursery handling. Prior to the initiation of the stimulation program and at the end of 10 days, all babies were evaluated (using the Cambridge Behavioral and Neurological Assessment Scale) by a medical student, who was neither involved in the care of the infants nor aware of the group to which a particular infant was assigned. A 1-year follow-up research with the Gesell Development Scales is planned.
Findings: Of the 26, 9-point behavioral rating scales studied on the Cambridge assessment instrument, the experimental babies showed positive changes of two or more points on 11 scales; while the control babies had changes of two points or more on only two scales. The experimental babies habituated more rapidly to light and sound, were more alert, had better general tonus, had better head control in response to a pull to sit, were more consolable, responded more rapidly to noxious stimulation, changed states more often, and demonstrated greater hand-to-mouth facility. Weight gain over the 10-day period was practically the same for both experimental and control infants.
Duration: Summer 1973-fall 1974.
Cooperating group(s): Department of Pediatrics, Buffalo Children's Hospital.

33-CG-2 EXPERIMENTER EFFECTS OF CHILDREN'S MOTOR PERFORMANCE

Investigator(s): Jerry R. Thomas, Ed.D., Codirector, Motor Development Laboratory, Florida State University, 216 Montgomery Gymnasium, Tallahassee, Florida 32306.
Purpose: To evaluate two experimenter effects on children's gross and motor performance: (1) the amount of the experimenter's previous contact with the subject, and (2) the interaction of the sex of the experimenter with the sex of the subject.
Subjects: 36 boys and 39 girls, ages 3 to 5, enrolled in the preschool program of the Florida State University Developmental Research School.

Methods: In order to evaluate the effects of the amount of previous contact with the experimenter on children's motor performance, the subjects were randomly assigned to five treatment conditions: no contact, one contact period, three contact periods, five contact periods, and teacher tested. Motor performance was assessed by one gross task and one fine coordination task. To evaluate the effects of the sex of the experimenter interacting with the sex of the subject for the same two motor tasks, the five treatment groups for experimenter contact were counterbalanced across the sex of the experimenter and the sex of the subject.
Findings: Neither the amount of the previous contact of the experimenter with the subject nor the sex of the experimenter produced significant differences in the subjects' motor performance. Thus, it appears that the experimenter effects frequently observed in young children's cognitive performances are not exhibited in this area of motor performance. A hypothesis was advanced that these results might be related to the type of motor task used as contrasted to the type of cognitive task frequently used in these kinds of studies.
Duration: August 1973-November 1974.
Cooperating group(s): Florida State University Developmental Research School.

33-CH-1 COMMUNICATIVE SPEECH AMONG PEERS IN A h .ROGENEOUS URBAN CO-OP NURSERY

Investigator(s): Suzanne Salzinger, Ph.D., Associate Research Scientist; Anne Lichtenstein, M.A., Research Scientist; and Jeanne Patenaude, B.A., Assistant Research Scientist, Biometrics Research Unit, New York State Department of Mental Health, 722 West 168th Street, New York, New York 10032.
Purpose: To study the communicative speech characteristics and changes in the characteristics of preschool children, especially in relation to verbal interaction patterns with peers and with mothers and home settings.
Subjects: Five boys and eight girls, ages 2.9 to 3.9, in an urban preschool and heterogeneous with respect to race and socioeconomic level.
Methods: Data are collected during the fall and spring of a school year. Dialogues of pairs of children in a playroom are tape recorded for 7 minutes. Speech interactions of each child during free play are observed daily for 2 minutes. Also, daily diagrams of group seating choices are made. In addition to these data, 10-minute tape recordings of each mother and child are made, and social data are obtained from interviews with mothers. Changes during the year in the fluency, communicability, verbal output, and presence of dialect forms of children's speech will be related to the factors of verbal interaction patterns with peers and with mothers.
Duration: September 1971-December 1974.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare; The Grant Foundation.

Intellectual

33-DB-1 COGNITIVE DEFICITS (DYSSYMBOLIA) IN ADOLESCENTS

Investigator(s): Rudolph F. Wagner, Ph.D., Chief Psychologist, Richmond Public Schools, 301 North Ninth Street, Richmond, Virginia 23219.
Purpose: To investigate dyssymbolia as a specific learning disability; and to systematically collect data to substantiate the theory of thinking deficits in normal adolescents.
Subjects: 25 males and females ages 12 to 25, with normal or superior intelligence, who have distinct deficits in inferential thinking.
Methods: Four instruments will be used: (1) Wechsler Intelligence Scale for Children, for intellectual-cognitive assessment; (2) the Wide Range Achievement Test, for reading assessment; (3) the Bender Visual Motor Gestalt Test for Children, for organic involvement and visual perception skills; and (4) the Kahn Test of Symbol Arrangement, for levels of symbolization and dyssymbolic diagnosis. A family history will also be recorded.
Findings: The existence of dyssymbolic deficit as one aspect of specific learning disabilities can be demonstrated. Remediation procedures are specific and different from reading deficit (dyslexic) conditions.
Duration: August 1973-summer 1974.
Publications: A paper presented at the International Symposium of Learning Disabilities, Miami Beach, Florida, November 1973: Cognitive deficits in adolescents: A dyssymbolic syndrome; and Wagner, Rudolph F. Dyssymbolia as a specific learning disability. *International Journal of Symbology*, 1974, 4(4).

33-DB-2 COGNITIVE AND SOCIOEMOTIONAL DEVELOPMENT OF PRESCHOOL CHILDREN IN AN INDIVIDUALIZED INSTRUCTION PROGRAM

Investigator(s): Richard John Fiene, M.A., Director, North Carolina Training Center for Infant-Toddler Care, University of North Carolina, Greensboro, North Carolina 27412.
Purpose: To investigate the cognitive and socioemotional transitions that children make in a preschool learning environment emphasizing individual instruction.
Subjects: 10 boys and 10 girls, ages 2.0 to 3.2.
Methods: The subjects were assessed (Caldwell Preschool Inventory) as they entered the preschool learning environment. The children spent 6 months in the project with an individually prescribed curriculum geared to each child's basic needs. The children were tested every 3 months on three measures.
Findings: All the subjects made significant gains on the Preschool Inventory ($t = 2.2$, $p < .10$) and on the Vineland Social Scales of Maturity ($t = 2.21$, $p < .10$).
Duration: January 1973-June 1974.
Publications: A program description is available from Project Individualized Instruction, 201 Sunrise Highway, Patchogue, New York 11772.

33-DB-3 EARLY EXPERIENTIAL ROOTS OF INTELLIGENCE AND MOTIVATION

Investigator(s): J. McVicker Hunt, Ph.D., Department of Psychology, University of Illinois, Urbana, Illinois 61801; Girvin E. Kirk, Ed.D., Children's Television Workshop,

1 Lincoln Plaza, New York, New York 10023; and John Paraskevopoulos, Ph.D., Ioannina University, Ioannina, Greece.

Purpose: To investigate the relationship between measures of the psychological development of children and the variations in the conditions in which they have developed or are developing; and to study the development of orphanage reared infants with various enrichments.

Subjects: Infants, ages birth to 3, in a Tehran orphanage.

Methods: In the longitudinal program in the Tehran orphanage, the control group consists of 15 infants who developed under the customary regime of the orphanage. In successive samples of 10, various audiovisual or human enrichments are added, and these infants are followed. The dependent variables are ages of achieving the successive steps on the Uzgiris-Hunt ordinal scales of sensorimotor development.

Findings: In the cross-sectional study in Greece (See *Research Relating to Children, Bulletin 27,* Study 27-DB-3, p.21), marked differences in the ages of children at levels of development for object permanence and vocal imitation were found, and an intervention program hastened the age of achieving top level object permanence without changing that of vocal imitation.

Duration: 1969-1976.

Cooperating group(s): Orphanage of the Queen Farah Pahlavi Charity Society, Tehran, Iran; Metera Center, Athens, Greece; Municipal Orphanage, Athens, Greece; Hebrew University and the Kibbutzim, Jerusalem, Israel.

Publications: Paraskevopoulos, J. and Hunt, J. McV. Object construction and imitation under differing conditions of rearing. *Journal of Genetic Psychology,* 1971, 119, 301-321.

33-DB-4 A PROGRAM TO ASSESS THE EFFECTS OF TELEVISION MODELS AND DIRECT INSTRUCTION ON THE DEVELOPMENT OF COGNITIVE SKILLS

Investigator(s): Ronald W. Henderson, Ed.D., Associate Professor; Barry J. Zimmerman, Ph.D., Associate Professor; and Rosemary Swanson, M.A., Coordinator, Department of Educational Psychology, College of Education, University of Arizona, Tucson, Arizona 85721.

Purpose: To test the efficacy of new television programming strategies for children based upon existing research on social learning and task analysis.

Subjects: 47 native American Papago children, ages 3 to 5, who attend Head Start Programs on the Papago Indian Reservation.

Methods: Television programming was designed to teach complex intellectual skills relating to conservation of number, enumeration, seriation, and question-asking. This was done by developing a task analysis for each set of skills, constructing behavioral objectives for each skill in the task hierarchy, and designing instructional materials on the basis of the task analysis and objectives. Performance measures were developed on the basis of the behavioral objectives. For each set of skills, the videotaped instruction was divided into segments, each approximately 10 minutes in duration. All testing and treatment was conducted individually with each child. Following a pretest, 23 experimental children were shown instructional tapes, while 24 control children viewed placebo tapes of equivalent duration. Posttest and retention scores were collected following the experimental intervention.

Findings: Findings are available for enumeration, seriation, and conservation experiments. These results indicate that complex rule governed behavior can be influenced through a systematic application of task analysis and social learning principles to instructional design for television. For enumeration, results were marginal with a significant difference between experimental and control subjects at only one of two training

sites. Data for the conservation and seriation studies were analyzed using a 2 × 2 × 3 repeated measures analysis of variance design: training site × experimental vs. control group × pretest, posttest, and retention phase. Highly significant treatment group by phase interactions were found in both conservation and seriation experiments. Orthogonal t-tests were used to examine each group's performance. For both experiments the treatment and control groups did not differ significantly in pretest performance, while the experimental group displayed significantly higher performance during posttest and retention phases. The increases from pre- to posttesting were significant for the treatment group only.

Duration: July 1973-June 1974.

Cooperating group(s): Office of Child Development, U.S. Department of Health, Education, and Welfare; Head Start Program, Papago Tribe.

33-DC-1 DEVELOPMENT OF LEARNING STRATEGIES

Investigator(s): John M. Belmont, Ph.D., Associate Professor; and Earl C. Butterfield, Ph.D., Associate Professor, Department of Pediatrics, Kansas University Medical Center, Kansas City, Kansas 66103.

Purpose: To chart the course of normal development of children's spontaneous learning strategies; and to study the changes in strategies with changing task demands.

Subjects: 160 subjects: 40 at each age level—11, 13, 15 years, and adult, equally divided by sex. Public school subjects are of average intelligence.

Methods: Subjects pace themselves in memorizing lists of words for subsequent immediate ordered recall. Pausing times between words are the index of learning strategy, and the interresponse time during recall indexes retrieval strategy.

Findings: Older children stabilize learning strategies faster than younger children. Older children's strategies may be more efficient than younger children's.

Duration: November 1973-May 1974.

Cooperating group(s): National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

33-DC-2 CONTINGENCY AWARENESS IN PREMATURE INFANTS

Investigator(s): Norman Solkoff, Ph.D., Professor, Department of Psychiatry, State University of New York at Buffalo, Buffalo, New York 14215.

Purpose: To study the effects of artificially created contingency situations (which allow infants to learn that their responses are related to consistent environmental feedback) on low birthweight infants in high risk nursery environments.

Subjects: 10 premature infants, 6 girls and 4 boys, in the Intensive Care Nursery of the Buffalo Children's Hospital.

Methods: A multicolored, multishaped, circularly arranged cardboard mobile was placed about 3 inches above the infant, whose head was propped up on a rolled-up blanket. For the experimental babies, a string was attached from the mobile to the infant's left ankle, so that each kick of the leg would produce movements of the visual display. For the controls, an identical mobile was used, but, although a string was placed around the left ankle, it was not attached to the mobile. Instead, a nurse moved the mobile during recording periods (15 minutes, four times a day, for 5 days), when she judged the infant to be most alert (as defined by the Cambridge Newborn Scales). The nurse and one observer

recorded four response measures during each period: total number of kicks, number of kicks with focus, kicks without focus, and focus time.

Findings: Over 5 days, the total number of kicks declined for both experimental and control group babies. The total number of kicks, while the infant was focusing on the mobile, increased in the experimental group, but decreased in the control group. Kicks without focus increased for controls and decreased for experimental infants. Also, focus time increased substantially for the experimental group, while it remained relatively constant for the control infants. The investigator concluded that, although normal infants may have few opportunities for contingency experiences because of their short memory spans and their long motor response recovery times, premature infants are at an additional disadvantage. Their first weeks of life are spent under barren, monotonous conditions in which environmental feedback for any response is minimal, if not non-existent.

Duration: Summer 1973-fall 1974.

Cooperating group(s): Department of Pediatrics, Buffalo Children's Hospital.

33-DC-3 DIAGNOSTIC AND PRESCRIPTIVE TEACHING AND LEARNING FOR PRIMARY GRADE CHILDREN

Investigator(s): Shirley Zeitlin, Ed.D., Director, Child Study Center Campus School, State University of New York, College at New Paltz, New Paltz, New York 12561.

Purpose: To create, through the use of diagnostic testing of kindergarten children, a developmental profile which will identify individual developmental patterns and learning styles.

Subjects: 45 kindergartners from the Campus School at the State University College, New Paltz.

Methods: The developmental profile will become the basis for the child's learning prescription in math and language arts. During the course of the year, each child will be given a battery of 10 tests including the Illinois Test of Psycholinguistic Abilities, the Bender Gestalt Test, and a sensory motor awareness survey. In addition, each child will be given an eye and ear examination.

Findings: Individual learning strengths and weaknesses can be identified early, before a child experiences failure and frustration in school.

Duration: September 1971-June 1976.

33-DC-4 SHORT-TERM MEMORY STRATEGY ASSESSMENT AND TRAINING: DEVELOPMENTAL COMPARATIVE ANALYSIS

Investigator(s): Douglas Friedrich, Ph.D., Research Director; and Fred Beno, M.A., Research Assistant, Department of Psychology, Central Michigan University, Mount Pleasant, Michigan 48859.

Purpose: To assess the capacity, limitations and strategy use of slow, average, and gifted learners; and to assess induced clustering and rehearsal strategy used by average and nonaverage children and adolescents in experimenter and self-pacing tasks.

Subjects: 240 boys and girls in preschool and grades 1, 3, 5, and 8; from low to average socioeconomic status families in a small Michigan community.

Methods: For each grade level, a 3 X 2 X 2 X 2 X 2 design was used: cognitive level groups X sex X strategy instruction X pacing X concept level, with repeated measures on the concept level factor. Eight subjects were included in each cognitive level X grade X sex variable level. The general short-term memory task involved free recall of objects

presented visually. Multivariate analyses were done on trials to criterion and clustering (within, between concept input and output response latency).

Findings: All studies are completed except eighth grade. Main effects of cognitive level group (hierarchical comparative relationship), pacing (self and experimenter), concept level (functional and abstract) grade level (hierarchical developmental relationship), clustering, and rehearsal instruction were found.

Duration: September 1973-July 1974.

Cooperating group(s): Harrison School System, Michigan; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: Prepublication copies of two manuscripts are available from the investigators: (1) a draft of the complete research project (all grades), and (2) the initial presentation of data at the 7th annual Gatlinburg Conference on Research and Theory in Mental Retardation (only preschool, first and third grades).

33-DD-1 HALSTEAD REITAN NEUROPSYCHOLOGY BATTERY: NORMATIVE DATA FOR AGES 5 TO 15

Investigator(s): Gerard W. Koth, M.A., School Psychologist, Psychological Services, Carver Office, Baltimore County Board of Education, Jefferson and Lennox Avenues, Towson, Maryland 21204.

Purpose: To develop normative data on the Halstead Reitan Battery for use in a diagnostic clinic established for children with learning disabilities.

Subjects: 330 children: 15 boys and 15 girls from each age level, 5 through 15, who attended a large public school system and were selected on a random basis. Children with known reading, speech and language problems, behavior problems, brain dysfunction, and repeaters were excluded from the sample.

Methods: The Halstead Reitan Neuropsychology Battery was administered according to standardized procedures found in the manual distributed by Reitan.

Findings: Normative tables were constructed on the average children at each age level.

Duration: August 1971-completed.

Publications: A report is available from the investigator.

33-DD-2 RETEST OF NORMATIVE STANFORD-BINET SAMPLE

Investigator(s): Robert L. Thorndike, Ph.D., Director, Institute of Psychological Research, Teachers College, Columbia University, Box 186, New York, New York 10027.

Purpose: To verify by longitudinal data the appearance of the drop in IQ between the preschool and school age years in the 1972 normative sample for the Stanford-Binet Intelligence Scale.

Subjects: 750 children, ages 3.6 to 6.6 at the time of their initial testing, who will be retested after approximately 3 years.

Methods: The study involves a longitudinal retesting of a group of individuals (who were initially tested during their preschool years) to see whether they will show a decline in IQ upon retesting that is comparable to the cross-sectional data obtained on preschool and school age groups.

Duration: October 1973-October 1975.

Cooperating group(s): Spencer Foundation.

33-DF-1 MOTIVATIONAL PROCESSES IN COMPUTER ASSISTED INSTRUCTION: THE EFFECTS OF CHOICE PARAMETERS UPON THE ENGAGEMENT LEVEL OF CHILDREN FROM LOW INCOME AREAS

Investigator(s): Maurice D. Fisher, Ph.D., Research and Development Associate; and Robert D. Hess, Ph.D., Professor, School of Education, Stanford University, Stanford, California 94305.

Purpose: To investigate the effects of giving children control over the difficulty levels of mathematics problems, and to study other control parameters concerned with reinforcement contingencies and posing problems.

Subjects: Approximately 100 boys and girls, ages 9 to 12, grades 4 to 5, primarily from Mexican-American families.

Methods: Two groups will be studied, one of which has control over the computer program, while the second has no control over the program. The children work on the computer daily for 15 days, and they can stay on the machines for a maximum of 35 minutes each day. The measures utilized to evaluate motivation, attitudes, and performance include the Stanford Achievement Test Computation Sub-Test, interview questions, computer assisted instruction Locus of Control Test, Engagement Observation Scale, and the percentage of the problems correctly solved. Studying decision making processes in a computer assisted instruction situation is a unique feature of this investigation. The data will be analyzed by means of chi-square tests, t-tests, analysis of variance, and regression analysis.

Duration: February 1972-November 1974.

Cooperating group(s): Alum Rock School District and Mayfair Elementary School, San Jose, California.

33-DF-2 DEVELOPMENT OF PROBLEM SOLVING BEHAVIOR IN CHILDREN: AN OPERANT ANALYSIS

Investigator(s): Joseph A. Parsons, Ph.D., Assistant Professor; and Douglas P. Ferraro, Ph.D., Professor, Department of Psychology, University of New Mexico, Albuquerque, New Mexico 87106.

Purpose: To investigate the function of overt precurrent mediating or problem solving behavior; specifically, to determine how mediating behaviors are acquired and maintained in the child's repertoire, and to determine if differential mediating responses will facilitate performance of delayed matching-to-sample.

Subjects: Eight normal preschool children, 4 girls and 4 boys, ages 4 to 5.

Methods: A single-subject research design is used (Sidman, 1960). Children are seen each week day for 30 minutes when they respond to a delayed mediating matching-to-sample task. Attending, mediating, and solution responses are recorded by counters; and stimulus and response contingencies are programmed by solid-state logic. Both intrasubject and intersubject comparisons will be made to determine the function of differential and nondifferential mediating responses.

Findings: Subtle contingencies are insufficient to promote acquisition of differential mediating responses. The data indicate that reinforcement of correct solutions (matching) does not lead to observable differential mediating responses. Once such responses are required, it appears they may be maintained by the solution-contingent reinforcer since they serve to increase accuracy when used.

Duration: November 1973-summer 1974.

Cooperating group(s): Research Allocations Committee, University of New Mexico.

33-DG-1 A DEVELOPMENTAL STUDY OF A MEASURE OF SPATIAL ROTATION

Investigator(s): Neil J. Salkind, Ph.D., Institute for Child Study, College of Education, University of Maryland, College Park, Maryland 20742.
Purpose: To develop and study the characteristics of a new measure of spatial rotation investigating the relationship between the perception of three dimensional objects and the perception of two dimensional pictures of those objects.
Subjects: 45 boys and 45 girls, ages 6, 8, and 10.
Methods: A methodological alternative to commonly employed tests of spatial visualization was developed and administered to 90 children in six groups separated by age and sex. The measure consisted of 40 items, each item consisting of the presentation of a two dimensional picture of that object, or a picture of another similar but different object. The subject's task was to indicate if the two dimensional stimulus is a picture of the object in hand or not. In addition to examining age and sex as independent variables, the viewing time of the two dimensional stimulus was varied, from the unlimited exposure condition to three limited levels of exposure, 1,000, 500, and 250 msec. A three dimensional repeated measures analysis of variance (Lindquist Type III) and correlational techniques were used to assess the data.
Findings: Significant sex differences for mean performance were found under both the unlimited and the limited exposure conditions. Males scored consistently higher than females under all conditions except the 500 msec. exposure level where 8-year-old girls were superior in performance to 8-year-old boys, and the 250 msec. exposure level where 10-year-old boys and girls performed equally well. Performance was also found to increase with age in a linear trend under both conditions. No significant differences were found among the three levels of limited exposure, although a significant difference was found between mean performance score for the three levels as a group and performance under the unlimited exposure condition. The results were interpreted in light of Jean Piaget's account of spatial operations in children and the psychometric approach towards the study of spatial abilities.
Duration: April 1972-completed.

33-DG-2 PERCEPTUAL-MOTOR CHARACTERISTICS OF BOYS AND GIRLS, AGES 4 TO 9

Investigator(s): Thais R. Beter, Ed.D.; and Wesley E. Crogin, Ph.D., Coordinators, Perceptual-Motor Program, Northwest Louisiana State School, 5401 Shed Road, Rossier City, Louisiana 71010.
Purpose: To establish the ages at which selected perceptual-motor characteristics are present in boys and girls, ages 4 to 9; specifically, to determine at what ages body image, laterality, and directionality appear to be established.
Subjects: 300 boys and girls, ages 4 to 9 (about 50 subjects in each age group), from a cross-section of day care centers and private and public schools.
Methods: The Beter-Crogin Test of Oral Directions-Motor Responses, which includes items to assess body image, laterality, and directionality, is administered individually to each subject. Scores are obtained for body image, laterality, and directionality which will be analyzed to determine if there are differences in the establishment of these characteristics between ages and sexes.
Duration: Fall 1971-fall 1974.

33-DG-3 A COMPARISON OF NORMAL AND MENTALLY RETARDED CHILDREN ON A PERCEPTUAL LEARNING TASK

Investigator(s): S. Jay Samuels, Ph.D., Professor; and Pamela Rollefson Terry, Ph.D., Center for Research in Human Learning, 205 Elliott Hall, University of Minnesota, Minneapolis, Minnesota 55455.
Purpose: To test the hypothesis that individuals of varying intelligence levels do not differ greatly in their basic learning ability.
Subjects: 24 sixth graders, ages 11 to 13: 7 boys and 5 girls classified as educable mentally retarded with a mean IQ of 69 and in a special classroom for the retarded; and 6 boys and 6 girls with normal IQ scores who were randomly drawn from other sixth grade classrooms in the same school.
Methods: The subjects received 20 days of testing. Their task consisted of making same-different discriminations of letter and letter-like figures presented by a P-L Systems Audio-Visual Trainer. The audiovisual trainer automatically tabulated latency as well as accuracy data. A one-between three-within repeated measure design was used. The factors were group (mentally retarded or normal), letters (old or new), mode of presentation (successive or simultaneous), and replications.
Findings: Initial latency differences between mentally retarded and normal groups disappeared when controls for basic reaction time differences were included. The results showed no differences between groups in their central processing of information. Instead, latency differences seemed to indicate differences in the time children needed to orient themselves to the stimulus, or to select and perform the motor task.
Duration: March 1973-completed.
Cooperating group(s): University of Minnesota Research, Demonstration and Development Center, Pattee Hall, Minneapolis.

33-DG-4 SELECTED VARIABLES WHICH AFFECT TACTUAL PERCEPTION OF TEXTURE BY BLIND CHILDREN

Investigator(s): Kenneth Hanninen, Ph.D., Associate Professor, Teacher Education Division, College of Education, Wayne State University, Detroit, Michigan 48202.
Purpose: To investigate how certain textures and tactile patterns on surfaces affect sighted and blind children's perceptual abilities.
Subjects: 55 children: 25 blind and 30 sighted, grades 4 to 12, of normal intelligence.
Methods: Data are collected on subjects' tactile preferences and length discrimination accuracies. Ten textures of three different lengths are mounted on hardboard. These stimuli are presented to the subjects for tactile examination. Stimuli are presented in pairs in order to make all possible comparisons. Also, data on tactile preference and size discrimination are collected from three-dimensional objects such as spheres and cubes made of two different textures. The data will be analyzed by groups (grades 4 to 8, grades 9 to 12, sighted children, and blind children) for differences in accuracy of discrimination and texture preferences.
Duration: May 1974-October 1974.
Cooperating group(s): Detroit Public Schools, Michigan.
Publications: A report of the study will be available from the investigator in May 1975.

33-DH-1 EFFECTS OF CONTEXT UPON CHILDREN'S SENTENCE COMPREHENSION

Investigator(s): Robert Hopper, Ph.D., Senior Research Associate, Center for Communication Research, University of Texas, CMA 7214, Austin, Texas 78712.
Purpose: To describe the effects of manipulations of the physical context (nonlinguistic) upon the linguistic performance of children.
Subjects: Approximately 150 boys and girls, ages 3 to 8.
Methods: The control group performs the ordinary linguistic tasks with no supplied visual contexts; whereas, the experimental group's experience involves the manipulation of the nonlinguistic context. Statistical analyses are repeated measures analysis of variance design in most studies.
Findings: Context manipulations seem to produce more marked effects upon performance in younger children than in older children. Even up to age 8 it is very difficult for subjects to respond correctly in the face of a context conflicting right response.
Duration: Summer 1971-summer 1975.
Publications: Hopper, Robert and Miller, Leslie. Children's dependence upon visual context in sentence comprehension. *Speech Monographs*, June 1972, 39(2), 140-143.

33-DH-2 LINGUISTIC INTERACTIONS AMONG CHILDREN

Investigator(s): David McNeill, Ph.D., Professor, Committee on Cognition and Communication, Department of Behavioral Sciences, University of Chicago, Chicago, Illinois 60637.
Purpose: To describe the form of speech transmission that spontaneously occurs in children to obtain information on language structure and function.
Subjects: 12 boys and girls, ages 2 to 4.
Methods: Observations are made from videotape. Linguistic interactions are coded on the basis of speech and context including a wide range of semantic, pragmatic, and syntactic factors. The speech contained in child to child, adult to adult, and adult to child interactions are compared.
Findings: The usages that occur in adults' speech, which is directed at children, agree in detail with the features children spontaneously introduce into their own speech to each other, but not to adults.
Duration: October 1972-November 1974.
Cooperating group(s): National Institute of Education, U.S. Department of Health, Education, and Welfare.

33-DH-3 THE KINESIC BEHAVIOR OF CHILDREN IN FACE-TO-FACE INTERACTION

Investigator(s): Walburga von Raffler-Engel, Ph.D., Associate Professor, Department of Linguistics, Vanderbilt University, Nashville, Tennessee 37203. Address correspondence to: Dr. Walburga von Raffler-Engel, 372 Elmington Avenue, Nashville, Tennessee 37205.
Purpose: To investigate whether bilingual children have two kinesic codes, and if so, to determine whether each code is language-specific, or whether it can be considered culture-bound.
Subjects: Boys and girls, 3 years 8 months and 8 years 9 months.
Methods: The study's design is based on the investigator's work using videotape in dialectology and on studies on the organization of behavior in face-to-face interaction. (See Publications below.)
Findings: It was concluded that the social situation is more important than language in

bilingual children's kinesic codes.
Duration: September 1973-September 1974.
Cooperating group(s): WSM-TV, Nashville, Tennessee.
Publications: A paper presented at the International Congress of Ethnology and Anthropological Science, Chicago, 1973: von Raffler-Engel, W. The correlation of kinesics and verbalization; A paper presented at the International Congress on Methods in Dialectology, University of Prince Edwards Island, Canada, 1972: von Raffler-Engel, W. The use of videotape in dialectology; Kendon, A. (Ed.) *The organization of behavior in face-to-face interaction.* (Proceedings of the pre-Congress: International Congress on Methods in Dialectology) University of Chicago, Department of Psychology, 1973 (to be published by Mouton, The Hague).

Personality

33-EA-1 THE VALIDATION OF A TEST DESIGNED TO MEASURE THE CREATIVE POTENTIAL OF PRESCHOOL CHILDREN

Investigator(s): Elizabeth K. Starkweather, Ph.D., Associate Professor, Department of Family Relations and Child Development, Oklahoma State University, Stillwater, Oklahoma 74074.
Purpose: To validate the Starkweather Originality Test by comparing originality scores, verbal ability scores, and scores indicating the freedom with which children express themselves in exploring and manipulating objects in their environment.
Subjects: 13 children, ages 4.3 to 4.11.
Methods: A technique for measuring freedom of expression, designed by Starkweather and Azbill (1965), was adapted for use in this research. Each child was observed while playing alone with four different sets of simple toys. His play behavior was recorded in a running record which was scored to indicate the number of different ways that the child played with each set of toys. These scores were then converted to scores which indicated the child's freedom of expression relative to that of the other children in the study. The Peabody Picture Vocabulary Test was used to measure verbal ability. Correlations among the three scores: originality, freedom of expression, and verbal ability were calculated in order to determine whether the originality test provides a valid measure of creative potential; i.e., whether it does measure a nonintellectual variable and is indicative of freedom of expression.
Findings: Originality test scores correlate significantly with freedom of expression and are not related to verbal ability scores.
Duration: September 1972-July 1973.
Cooperating group(s): Oklahoma State University Research Foundation.

33-EA-2 COMPARISON OF PERSONALITY TRAITS OF CHILDREN IN TRADITIONAL AND IN OPEN CLASSROOMS

Investigator(s): Clayton Farrall, Ph.D., Professor, College of Education; and Karl Thaller, Ph.D., Associate Professor, Department of Psychology, State University of New York, College at Potsdam, Potsdam, New York 13676.
Purpose: To determine if differences in personality traits exist between two groups of

children, after one group has experienced a 3-year period in an open classroom setting and the other group has experienced a strictly traditional setting.

Subjects: 32 boys and 30 girls, ages 8 to 10, in the open classroom group; and 63 boys and 70 girls, ages 8 to 10, in the traditional classroom group. Both groups were composed of children primarily from middle class backgrounds with fathers in semi-skilled, skilled, business, and professional occupations.

Methods: The open and traditional classroom groups were similar in terms of the children's age, IQ, and socioeconomic status. The children were administered the Institute for Personality and Ability Testing (IPAT) Children's Personality Questionnaire. Differences between the mean scores of open classroom children and traditional classroom children were analyzed by significance tests for each of the 14 personality traits measured by the personality questionnaire. The mean score differences for each trait were also analyzed by sex.

Findings: Based on significant differences between the two classroom groups, children from open classrooms were more outgoing, abstract, emotionally stable, excitable, assertive, happy-go-lucky, conscientious, venturesome, tendermind·d, shrewd, apprehensive, casual, and tense than children from traditional classrooms. When analyzed by sex, the pattern of differences between girls in open and traditional settings was not similar to the pattern of differences between the boys in open and traditional settings.

Duration: October 1972-May 1974.

Cooperating group(s): Campus Research and Demonstration Center, State University of New York, College at Potsdam.

Publications: Mimeographed copies of the report are available from the investigators.

33-EB-1 THE RELATIONSHIP BETWEEN SEX ROLE IDENTIFICATION AND BEHAVIORAL INDEPENDENCE IN PRESCHOOL CHILDREN

Investigator(s): Elizabeth K. Starkweather, Ph.D., Associate Professor, Department of Family Relations and Child Development, Oklahoma State University, Stillwater, Oklahoma 74074.

Purpose: To study sex differences in preschool children's sex role identification as indicated by the stability of their masculine and feminine preferences; and to study the relationship between sex role identification and behavioral independence.

Subjects: 64 children, ages 3.2 to 5.5.

Methods: The Starkweather Masculinity-Femininity Test (M-F) and the Starkweather Independence Test were the instruments used in this study. Two forms of the M-F Test were administered in a test-retest sequence. For each child, this testing provided two M-F scores, which indicated the extent to which the child's preferences were masculine or feminine; and a stability score, which indicated the extent to which the child had identified with the sex role suggested by his expressed masculinity or femininity. The Independence Test provided a measure of the relationship between the level of difficulty at which a child worked and the extent to which he accepted help.

Findings: Girls showed greater stability in M-F scores than did boys. Girls were more free to show masculine preferences than boys were free to show feminine preferences. The stability of a child's responses was not related to his expressed masculinity or femininity. Boys and girls who had identified their sex roles were behaviorally more independent than those who had not.

Duration: September 1971-completed.

Cooperating group(s): Oklahoma State University Research Foundation.

33-EB-2 THE DEVELOPMENT OF CONCEPTS OF BODY PARTS AND FUNCTIONS IN YOUNG CHILDREN

Investigator(s): Keturah E. Whitehurst, Ph.D., Professor; and Gloria Poindexter, B.S., Department of Psychology, Virginia State College, Petersburg, Virginia 23803.
Purpose: To investigate the emergence and understanding of concepts of body parts and functions in the developing Black child.
Subjects: Black boys and girls, ages 2 to 5, from the lower and middle classes.
Methods: All subjects were seen individually and asked to draw a person. Each child was also shown a mannikin representing his or her sex and asked to describe the functions of the parts of the body. Developmental graphs were drawn relating the number of body parts subjects recalled and the number of accurately designated functions to increasing ages.
Duration: February 1974-December 1974.
Cooperating group(s): School of Graduate Studies, Virginia State College; Children's House, Virginia State College.

33-EB-3 DEVELOPMENT OF SELF-REGARD IN PRESCHOOL CHILDREN

Investigator(s): Lucie W. Barber, Ed.D., Research Associate, Union College Character Research Project, Union College, 207 State Street, Schenectady, New York 12305.
Purpose: To field test seven developmental scales intended to help parents to evaluate their child's level of self-regard.
Subjects: 150 volunteer parents (of children ages 2 to 5).
Methods: The seven scales measure different components of self-regard as indicated by the Peatling-Tiedeman Model of Personality. Educational kits are being developed that are coordinated to the scale points to help parents guide the progress of their child from level to level. After field testing the scales and educational kits with the first group of 150 volunteer parents, the scales will be field tested with a national sample in the fall of 1974.
Duration: September 1973-December 1975.
Cooperating group(s): Lilly Endowment.
Publications: Resources for the educational kits are available from Research Curriculum, Union College Character Research Project.

33-EC-1 VALUE DIFFERENCES BETWEEN TEACHERS AND HIGH SCHOOL STUDENTS CLASSIFIED BY LEVEL OF SOCIAL ADJUSTMENT

Investigator(s): Richard C. Pooley, Ph.D., Department of Guidance and Educational Psychology, Southern Illinois University, Carbondale, Illinois 62901. Address correspondence to: 503 West College Street, Carbondale, Illinois 62901.
Purpose: To determine whether value differences exist between high school students and their teachers.
Subjects: A random sample of 153 high school sophomores and 21 teachers in a middle class to upper middle class setting.
Methods: A Value Survey developed by Milton Rokeach was administered to all subjects. Teachers classified the students into three social adjustment categories: exceptionally well-adjusted, moderately well-adjusted, or maladjusted. The values of the teachers and the three groups of students were compared, and the degree of difference was determined

by the median test, or chi-square.
Findings: There were no differences in the value systems of the students classified by the teachers according to their social adjustment. However, there were differences between the value systems of the students in general and the teachers. For instance, students in general differed from teachers concerning the values "capable," "loving," and "cheerful."
Duration: February 1971-completed.
Cooperating group(s): Project Youth Opportunity, South St. Louis County; Administration of Justice Department, Southern Illinois University.
Publications: Multilith copies of the report are available from the investigator at $2.00 each.

33-EC-2 OVERJUSTIFICATION, COMPETING RESPONSES, AND INTRINSIC MOTIVATION

Investigator(s): Steven Reiss, Ph.D., Assistant Professor; and Leonard Sushinsky, Ph.D., Assistant Professor, Department of Psychology, University of Illinois at Chicago Circle, Box 4348, Chicago, Illinois 60680.
Purpose: To assess the effects of token economies on intrinsic motivation.
Subjects: 41 boys and girls in kindergarten.
Methods: The subjects were rewarded for listening to a song. Noncontingent reward was provided in the first study, while contingent reward (token economy) procedures were provided in the second study. Posttests consisted of an assessment of free play preference for the rewarded song.
Findings: Noncontingent reward undermines intrinsic motivation. This result agrees with previous findings by Lepper, Greene, and Nisbett (1973). Contingent reward procedures promote subsequent intrinsic motivation.
Duration: June 1973-completed.
Cooperating group(s): Illinois School District #97.

33-EC-3 THE APPLICABILITY OF VALUE CLARIFYING STRATEGIES IN HEALTH EDUCATION AT THE SIXTH GRADE LEVEL

Investigator(s): Norma Joyce W. Hopp, Ph.D., Assistant Professor, School of Health, Loma Linda University, Loma Linda, California 92354.
Purpose: To study the use of value clarification techniques in sixth grade health education classes.
Subjects: All sixth grade students in three selected public schools of the San Bernardino Unified School District, California.
Methods: Matched groups of subjects were pretested for value clarity. Intervention by health instruction using value clarification strategies followed. The subjects were then posttested with the pretest instrument in order to determine their value clarity. The instrument, developed expressly for use in this study, attempted to determine students' clarity of values in areas of health education which were covered during their term of study. It consisted of a series of problem situations with multiple choice answers. Interviews with selected students were conducted in order to determine the use of steps in the process of valuing. Data analysis involved the application of a Likert scale to pre- and posttest scores. Each answer (from 1 to 4) was assigned a weight according to the step in the valuing process the student was found to be using. The individual's total score indicated his level of awareness of values held, or his value clarity.

Findings: Teachers reacted enthusiastically to the use of this teaching methodology. Students who initially had unclear values demonstrated the greatest change in value clarity following values clarification emphasis.
Duration: September 1973-January 1974.

33-ED-1 AGGRESSION IN BOYS IN A CLINIC POPULATION

Investigator(s): Leonard Goldberg, Ph.D., Clinical Psychologist, 1274 East 72nd Street, Brooklyn, New York 11234; and Harold Wilensky, Ph.D., Professor, Department of Psychology, Psychological Center, City College of the City University of New York, New York, 10031.
Purpose: To identify causal factors and practical means of controlling aggressive behavior.
Subjects: 35 aggressive and 35 nonaggressive boys and 6 aggressive and 9 nonaggressive girls, ages 7 to 11, seen at the Brooklyn Community Counseling Center, a private outpatient psychiatric clinic.
Methods: The clinical records of the subjects were examined for evidence of parental and peer models, frustrating life experiences, and capacity for fantasy on projective tests. The aggressive and nonaggressive groups were compared for frequency differences (nominal data) or mean differences (continuous data). Correlations were also calculated to determine the degree of relationship between aggression and dependent variables.
Findings: Because of the small sample, findings related to girls were regarded as tentative. The most striking difference between aggressive and nonaggressive groups appeared in the high frequency of aggressive behavior in parents and peers of the aggressive children, and the relative absence of such behavioral models for the nonaggressive groups. Support for fantasy and frustration theories was also found.
Duration: January 1973-January 1974.

33-EE-1 LONG-TERM NEUROLOGICAL PROGRESS OF ADDICTED NEONATES

Investigator(s): Gerald Erenberg, M.D., Pediatric Neurologist; Gerald Golden, M.D., Pediatric Neurologist; Gerald Nathanson, M.D., Neonatologist; and Steven Mattis, Ph.D., Neuropsychologist, Center for Child Development, Morrisania City Hospital, 168th Street and Gerard Avenue, Bronx, New York 10452.
Purpose: To follow anterospectively the neurological and psychological development of a group of infants who had been addicted to heroin or methadone *in utero* and had shown withdrawal symptoms in the neonatal period.
Subjects: 30 neonates who were addicted to heroin *in utero*, and 30 matched neonates who were not addicted.
Methods: All of the subjects will be evaluated at 6-month intervals by neurological and psychological examinations appropriate for their age.
Duration: July 1973-June 1976.
Cooperating group(s): New York City Health Research Council.

33-EE-2 EFFECT OF NARCOTIC WITHDRAWAL ON NEONATAL SLEEP PATTERNS

Investigator(s): Thomas R. C. Sisson, M.D., Director, Neonatal Research; and Norman Kendall, M.D., Chairman, Department of Neonatology, School of Medicine, Temple University, 3401 North Broad Street, Philadelphia, Pennsylvania 19140.
Purpose: To study the sleep patterns of neonates undergoing narcotic withdrawal.
Subjects: 18 newborn infants of mothers addicted to heroin and/or methadone.
Methods: Electroencephalographic recording was made of the brain activity of neonates during narcotic withdrawal (before, during, and after treatment). Extraocular movement and electrokinetic activity (EMG) was monitored by polygraphic recording.
Findings: Subjects' rapid eye movement (REM) sleep cycles were obliterated.
Duration: June 1973-June 1974.
Cooperating group(s): Department of Neurology, Temple University.
Publications: Sisson, T. and Kendall, N. Effect of narcotic withdrawal on neonatal sleep patterns. (Abstract) *Transactions of the American Pediatric Society,* 1974, 8(177).

Social

33-FA-1 SOCIAL BEHAVIOR ASSESSMENT OF ELEMENTARY SCHOOL CHILDREN

Investigator(s): John Feldhusen, Ph.D., Professor; and Ernest McDaniel, Ph.D., Professor, Department of Education, Purdue University, West Lafayette, Indiana 47906.
Purpose: To develop a peer rating scale of the social behaviors of elementary school children which overcomes the weaknesses of sociometric and observation methods of assessing socialization; to develop an instrument to be used in research on the socializing effects of schools upon children; to describe patterns of cognitive, affective, and social growth among the children and to identify school and home variables which influence such growth; and to investigate the complex interactions among home, school, and student variables as they evolve through the elementary school years.
Subjects: 730 boys and girls, grades 1 to 6, from small, medium, and large cities; including a broad representation of Black children and poor children.
Methods: The Peer Rating Scale was developed and field tested in three stages. In the first stage, three preliminary forms were developed and the possibility of response bias caused by acquiescence was investigated. After an initial field test with first, second, and third graders, the instrument was revised in the second stage. The revisions included wording all items positively, increasing the total number of items, eliminating sex-biased words from items, and developing a nonreading form for grades 1 and 2. In addition, the 12 subscales of the instrument (leadership, independence, assertiveness, competitiveness, cooperativeness, conformity, authority relations, control of aggression, liking others, social acceptance, being liked, and popularity) were logically grouped into three major scales: Individual Prosocial Action, Social Interaction, and Affective Relationships. The 60-item Peer Rating Scale was then field tested with children in grades 1 through 6. The scale is administered on an item sampling basis, and each child rates the behavior of three peers (randomly assigned to him or her). The construct score correlation matrix for this group was factor analyzed. The third stage of the development of the sclae included a final field test, item analysis, and examination of the relationships between the scale and other measures which included parental- and self-assessments of personal-social variables. A longitudinal study is planned to investigate the school and home influences affecting children's growth and development during their elementary school

years. Children in grades 1 through 6 will be tested in the fall and spring of the initial year of the study. Intensive data will be collected about the home background of the children and the characteristics and behavior of the classroom teacher. During 2 subsequent years, data will be collected from a limited sample of children who originally were tested in grades 1 and 4. By linking the 3-year segment from the fourth grade group, a picture of development spanning the 6 elementary school years will be obtained.

Findings: Item analysis indicated that the Peer Rating Scale discriminated moderately well between high and low scorers on the socialization constructs. The total score reliability estimates were satisfactory for the 60-item form used with fourth graders (internal consistency coefficient of .89 and interjudge agreement index of .45), but were less adequate for the 36-item form used with first graders (.65 and .36 respectively). The factor structure was more stable at higher grade levels. The investigators concluded that correlations of the scale with other measures related in theory to socialization were sufficiently high to provide evidence of convergent validation.

Duration: July 1972-July 1975.

Cooperating group(s): Office of Education, U.S. Department of Health, Education, and Welfare.

Publications: Two papers presented at the annual meeting of the National Council on Measurement in Education, Chicago, April 1974: Widlak, F. W. and Hynes, K. P. The development and empirical verification of a peer rating scale for social behavior of elementary school children; and Feldhusen, J. F. and McDaniel, E. D. Social behavior assessment of elementary school children—Theoretical rationale for a peer rating scale and its role in a longitudinal study.

33-FA-2 TELEVISION AND PROSOCIAL BEHAVIOR

Investigator(s): Aletha Huston Stein, Ph.D., Associate Professor; and Lynette Kohn Friedrich, Ph.D., Assistant Professor, S-110 Department of Human Development, Pennsylvania State University, University Park, Pennsylvania 16802.

Purpose: To explore the effects of a prosocial television program, "Mr. Rogers' Neighborhood," on the learning and behavior of preschool children; and to develop materials and procedures for rehearsals of program content in play activities and early childhood education curricula.

Subjects: 150 Black and White boys and girls, ages 3 to 5, in inner city Head Start programs.

Methods: The subjects were divided into four treatment groups. The first group viewed neutral films. The second, third, and fourth groups viewed "Mr. Rogers' Neighborhood" films. The second group only watched the films; the third group also received classroom materials to stimulate rehearsal; and the fourth group also received special classroom materials and teaching procedures. Classroom observations were conducted during a baseline period and during the 8 weeks of the experiment. Categories of behavior observed were positive social behavior, self-control, fantasy play, aggression, and task persistence.

Duration: September 1973-September 1974.

Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare; Head Start centers in Philadelphia, Pennsylvania.

Publications: Contact the investigators for further information.

33-FC-1 INCIDENCE OF DRUG USE AND ISSUES OF PREVENTION

Investigator(s): Arline C. Erlick, D.Ed., Assistant Director, Measurement and Research Center, Purdue University, 402 Engineering Administration Building, West Lafayette, Indiana 47907.

Purpose: To obtain information about adolescents' present attitudes towards social, legal, and educational issues related to alcohol, tobacco, and marijuana; and to investigate some of the influences on adolescents in relation to these attitudes.

Subjects: 1,966 students in grades 10, 11, and 12 in public and private secondary schools throughout the United States; stratified to match 1970 Census distributions according to age, sex, rural-urban residence, and geographic region.

Methods: A sample survey was used in which a questionnaire was administered in schools by teachers or counselors as part of the normal school routine. From over 9,000 returns, a random, stratified, national sample was determined. Several issues examined in this survey were (1) the incidence of use of alcohol, tobacco, and marijuana by students, peers, and parents; (2) how helpful the schools' drug education programs were and what preferences students had for help with these issues; and (3) students' attitudes towards social, legal, and educational aspects of drug issues, and if they were related to their concern about developmental tasks and parents' use of or attitudes towards drugs. Information was also obtained concerning (1) parents' education and strictness as disciplinarians, and (2) students' grades, future plans, and degree of concern about developmental tasks. Chi-square analysis was performed.

Findings: Eight percent of the students reported their school's drug education services were adequate. Adolescents' attitudes towards drugs appeared to be related to the pattern of parents' use of the drugs. This was true for parents' use of alcoholic beverages and tobacco and their children's attitudes towards (a) legal issues, (b) use of drugs by others, and (c) perception of drug use by peers. Yet, parental disapproval of drug use was high (60% to 70%). Although most states in the nation restrict by law the age for the use of alcoholic beverages, customs for alcohol experimentation appear in clear defiance of such laws. In 1973, more than 7 out of 10 (72%) adolescents have had their first alcoholic drink at 14 years of age or younger; 87% have tasted an alcoholic drink by age 16. The percentage of alcohol experimenters in the age 14 or younger group has nearly tripled between 1957 (27%) and 1973 (72%), according to Purdue Opinion Panel studies. Present use of drugs at the rate of "several times a week" among students was (a) beer, 10%; (b) cigarettes, 23%; and (c) marijuana, 8%. Percentages of students who had never used these drugs were (a) beer, 12%; (b) cigarettes, 23%; and (c) marijuana, 64%. Thirty-four percent of these students had experimented with marijuana.

Duration: September 1972-April 1973.

Publications: Erlick, A. C. Incidence of drug use and issues of prevention. *Report of Poll 97*, 1973, 32(2). Copies of the report are available for $2.50. Make checks payable to The Purdue Opinion Panel, Measurement and Research Center, Engineering Administration Building, Purdue University, West Lafayette, Indiana 47907.

33-FC-2 GRADE SCHOOL SMOKING STUDY

Investigator(s): Jerome L. Schwartz, Ph.D., Medical Care Consultant, 3101 Benvenue Avenue, Berkeley, California 94705.

Purpose: To devise a smoking curriculum for grade school students; to study attitudes and current smoking habits of grade school children; and to relate variables to the initiation of smoking.

Subjects: Fourth and sixth graders in Berkeley, California.

Methods: The children were pretested, presented a smoking program, and posttested. Instruments were used to collect demographic, social, and background information and attitudes towards and knowledge about smoking. Pictures were shown with and without smoking backgrounds. Fourth graders were followed up 2 years later. A curriculum for fourth grade pupils has been designed. Children may be followed up in the 10th grade (6 years after first contact, 4 years after second contact) to determine smoking habits and to relate pertinent variables to findings.
Findings: Preliminary results indicate that attitudes expressed were in opposition to smoking, yet some children began smoking out of curiosity, imitation of adults, independence, or wishing to appear grown up. Most children had experimented with cigarettes.
Duration: July 1970-continuing.

33-FC-3 OPERATION REACH EVALUATION

Investigator(s): Sam Sloane, B.A., Research Executive, Boy Scouts of America, North Brunswick, New Jersey 08902; and Fred Streit, Ph.D., President, Fred Streit Association, 168 Woodbridge Avenue, Highland Park, New Jersey 08904.
Purpose: To evaluate Operation Reach (an action-oriented drug abuse prevention program of the Boy Scouts of America) to determine the degree to which it meets its goal of creating an understanding of and positive attitudes towards life-enhancing values by youth.
Subjects: Four Boy Scout troops and four posts for urban, suburban, and rural strata (24 units) from among groups and posts participating in the Operation Reach program; and a similarly stratified selection of four troops and four posts from among nonparticipating troops and posts.
Methods: Operating on the assumption that changing the underlying causes of drug abuse will result in significant reduction in drug abuse, the goals of Operation Reach are to engage young people to help each other find life-enriching values. The values include finding friends who care and to care about, open communication with parents and family members, being a part of something beyond oneself, knowing oneself, and having the courage to take an open stand against drug abuse. The evaluation of Operation Reach involves measurement of these life-enriching values primarily as they impinge upon the child's perception of the family, the child's perception of himself, and what changes occur after exposure to Operation Reach. Operation Reach consists of a series of special Scout meetings aimed at improving the abilities of families to communicate and encouraging young people to help one another in taking a stand against drug abuse. The first objective of the evaluation is to determine if Operation Reach results in a significant positive change in the members' perception of family as measured by the Youth Perception Inventory and in the self-concept as measured by Piers-Harris Test of Self-Concept. This is determined by administering the instruments to the sample prior to the implementation of Operation Reach and readministering the instruments after the program. The data will be analyzed by nonparametric statistical procedures comparing participants' pretests and posttests to nonparticipants' pretests and posttests, and comparing participants' and nonparticipants' pretests to their posttests. This analysis will be repeated separating boy and girl subjects. Also to be compared are pretests and posttests among geographic areas, various age levels, and perceptions on eight factor loadings of child's perceptions of parental behavior. The second evaluation objective is to determine if Operation Reach has a significant impact on reducing alienation, increasing concern for others, and increasing the ability to take a positive stand against drug abuse among participants as measured by the Streit Problem Behavior Inventory. The experimental design parallels the design for the first objective, as well as including the development and validation of a survey instrument. The data will be analyzed primarily by nonparametric tests and a z-test between two proportions.

Duration: February 1973-August 1974.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare; Baltimore Area Council, Boy Scouts of America.

33-FD-1 NATIONAL SURVEY OF NEEDS, CONCERNS, AND ASPIRATIONS OF GIRLS, AGES 12 TO 18, IN THE UNITED STATES

Investigator(s): Gisela Konopka, D.S.W., Director, Center for Youth Development and Research, University of Minnesota, 325 Haecker Hall, St. Paul, Minnesota 55108.
Purpose: To obtain a better understanding of adolescent girls and improve the development of programs with adolescent girls.
Subjects: 1,000 girls, ages 12 to 18, from 10 regions in the United States and from various racial, ethnic, and economic groups.
Methods: The data are collected by trained interviewers by open-ended and in-depth interviews. Data analysis includes a content analysis of the interviews, an intensive search of the literature, and only limited statistical treatment.
Duration: October 1973-June 1975.
Cooperating group(s): Lilly Endowment, Incorporated.

33-FE-1 EFFECTS OF TELEVISION ADVERTISING AND NEWS PROGRAMMING ON CHILDREN

Investigator(s): Charles Atkin, Ph.D., Assistant Professor, Department of Communication, Michigan State University, East Lansing, Michigan 48824.
Purpose: To determine the social and political impact of television viewing on preschool and grade school children in the family context.
Subjects: Children involved in (1) advertising surveys: over 1,000 boys and girls, grades K through 8; (2) news surveys: over 700 boys and girls, grades K through 5; and (3) advertising-news lab experiments: over 700 boys and girls, grades 3 to 5. Mothers of 50 percent of the children involved in advertising and news surveys also served as subjects.
Methods: The project includes advertising surveys, news surveys, and advertising and news laboratory experiments. Surveys consist of questionnaires measuring naturalistic viewing patterns and knowledge, attitudes, and behavior relating to television advertising or news content. Parents are interviewed in this phase of the investigation. The experimental studies manipulate dimensions of news content or advertising presentation in more than 20 different sub-experiments. In these experiments, postviewing responses of subjects exposed to one or another version of a stimulus tape are measured.
Findings: Advertising exposure produces requests to parents, parent-child conflict, limited consumer learning about products, materialism, and occasional prosocial and aggressive behavior. News viewing, especially with parents, stimulates awareness, knowledge, interest, and information seeking regarding news.
Duration: September 1972-September 1974.
Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare; National Association of Broadcasters.

SPECIAL GROUPS OF CHILDREN

Physically Handicapped

33-GA-1 INCIDENCE OF MYOPIA IN THE SIXTH GRADE

Investigator(s): John W. Streff, B.S., O.D., Director, Vision Research, Gesell Institute of Child Development, 310 Prospect Street, New Haven, Connecticut 06511.
Purpose: To determine if changes in the incidence of myopia would be reflected as a result of several modifications within a public school system, including grouping changes, program modifications with more physical involvement, and architectural changes.
Subjects: 564 sixth graders: 223 boys and 178 girls in the experimental school; 83 girls and 80 boys in the control school.
Methods: Two kinds of control groups were used. One was the incidence of myopia in the experimental school 3 years ago (before the children had benefit of the program) and the other was to use a neighboring school system with a comparable socioeconomic status. The refractive status of the children was determined by use of a phoropter and retinoscopy procedures. An analysis is being done to relate the distribution of refractive status of the population, with special attention to the incidence of myopia.
Findings: Of the 401 children in the experimental school, 49 were found to be myopic (more than -0.50 diopters). Of the 163 children in the control school, 33 were found to be myopic.
Duration: November 1973-November 1974.
Cooperating group(s): The Cheshire Public School, Cheshire, Connecticut; The Woodbridge Public School, Woodbridge, Connecticut.

33-GA-2 THE USE OF RESOURCES BY CHRONICALLY, PHYSICALLY HANDICAPPED CHILDREN IN CARE OF THE CHILDREN'S AID SOCIETY OF VANCOUVER, BRITISH COLUMBIA

Investigator(s): Ruth Chisholm, M.S.W., Research Coordinator, Vancouver Resource Board, Families' and Children's Division, 1675 West Tenth Avenue, Vancouver 9, British Columbia, Canada.
Purpose: To determine the prevalence, residential placement, and use of medical and educational resources by physically handicapped children in the care of the Children's Aid Society of Vancouver, British Columbia.
Subjects: 254 chronically physically handicapped children entered in the British Columbia Registry of Handicapped Children, in care of the Children's Aid Society on June 30, 1973. No subjects had emotional problems which were not accompanied by a physical handicap, and none had IQ's greater than 80.
Methods: The study compared characteristics of the handicapped group with all other children in care. Diagnostic handicaps were described according to the International Classification of Diseases Adapted-8; functional handicaps, according to the R. S. Holt Classification System. The residential placement of each child was recorded according to the type of placement and geographic location. Medical, educational, and recreational resources used by the children were described, including the relationship of these resources to the child's residence. The relationship between the child and his family and

the factors affecting admission to care were also described.
Findings: Mental disorders account for the largest proportion of handicap (31 percent), while diseases of the nervous system and sense organs account for 26 percent; congenital handicap, 25 percent; and all other handicaps, 18 percent. An analysis of functional handicap indicates that deafness represents the largest area of complete disability followed by behavior and speech problems. Comparing handicapped children with other children in care, it was found that three times as many handicapped children are admitted to care as infants, and a significantly higher proportion of handicapped males remain in care than females. Almost twice as many handicapped children are permanent wards as compared to other children in care. The residence of a handicapped child is more likely to be a foster home or an institution than a group home, their own home, or a reception or adoption home. Foster homes are more frequently in the outlying districts. The study indicates that 31 children could have remained with their parents if money were available to provide needed services, and 32 children would have remained with their parents if resources for treatment were closer to home.
Duration: April 1973-July 1974.
Cooperating group(s): Medical Services, Children's Aid Society of Vancouver.

33-GA-3 INDIVIDUALIZED DATA BASE PROJECT

Investigator(s): Alan Boroskin, Project Director; and Richard K. Eyman, Principal Investigator, Individualized Data Base Project, Neuropsychiatric Institute, Pacific State Hospital, P. O. Box 100-R, Pomona, California 91798.
Purpose: To develop a model data tracking system for developmentally disabled persons.
Subjects: Developmentally disabled persons (epileptic, cerebral palsied, and mentally retarded), all ages, both sexes, in Montana, Nevada, Virginia, Colorado, and parts of California, New Mexico, Arizona, Oregon, and Hawaii, who seek treatment or services from an agency participating in the project.
Methods: A model system was developed in which baseline data is collected on all clients using three collection instruments: (1) intake information, including family and background characteristics; (2) diagnosis and evaluation; and (3) a behavioral development survey form of the client's developmental status. As a client changes living arrangements or social services, he is tracked using a notification of change form. The client is re-evaluated on a yearly basis to determine developmental progress, which is correlated with the various services and living plans. Computerized reports describing given populations are provided to the states and agencies participating in the project. The results will be analyzed to determine overall patterns of care on client development.
Duration: January 1973-January 1978.
Cooperating group(s): Colorado Epilepsy Association; American Cerebral Palsy Association; various state Developmental Disability Councils.
Publications: A series of publications is available from Neuropsychiatric Institute, Pacific State Hospital: *Data system handbook*, IDB Publication Series No. 1, January 1973; *An approach to establishing a data system for monitoring client development in community care programs*, IDB Publication Series No. 2, August 1973; *Implementation and application* (Conference report on the establishment of an individualized data base), IDB Publication Series No. 3, December 1972; *Profiling adaptive behavior: A computerized approach*, IDB Publications Series No. 4, November 1973; and *Report manual*, IDB Publication Series No. 5, February 1974.

33-GB-1 A BEHAVIORAL DIAGNOSIS FOR NARCOLEPSY

Investigator(s): M. Robert Wilson, Jr., M.D., President and Psychiatrist-in-Chief; Richard E. Byrd, Ph.D., Provost and Vice-President; and Christopher La Londe, B.A., Clinical Research Associate, The Constance Bultman Wilson Center for Education and Psychiatry, Box 509, Faribault, Minnesota 55021.

Purpose: To develop an additional, less expensive and sophisticated means than the electronic pupillograph of identifying persons with the sleep-wakefulness disorder of narcolepsy; and specifically, to research the possibility that narcolepsy can be identified through observable human behaviors.

Subjects: 10 boys and 10 girls, ages 13 to 19.

Methods: Depending on the results of a pupillogram administered at the Mayo Clinic, Rochester, Minnesota, subjects will be placed into one of five levels of wakefulness. Level I (non-narcoleptic) subjects will serve as controls. Judges drawn from three occupational categories (teachers, nurses, and psychotherapists) will observe subjects' behaviors exhibited during the performance of a standardized behavioral task. Identification of behaviors associated with each level of wakefulness and inter- and intrajudge reliability will be assessed from the results of an unstructured Q-sort. The statistical analysis will be a computation of coefficients of correlation. After the sorts are intercorrelated, the resulting R matrix will be factor analyzed.

Findings: Interim results show that there are observable behaviors at each level of wakefulness, and that the physiological categories rendered by the pupillograph can be expanded. Noticeable behavioral differences between categories are irritation and inattentiveness. The judges mean effective reliability has been .72 or better. No occupational differences in observational skills have been noted.

Duration: July 1973-June 1975.

33-GB-2 CLINICAL AND BIOCHEMICAL CORRELATIONS IN ASTHMA

Investigator(s): Elliot Middleton, Jr., M.D., Director, Clinical Services and Research, Children's Asthma Research Institute and Hospital, National Asthma Center, 1999 Julian Street, Denver, Colorado 80204.

Purpose: To determine the underlying biochemical abnormalities that characterize the different clinical manifestations of asthma.

Subjects: 50 severe, chronic asthmatic boys and girls, ages 8 to 16.

Methods: Determination of the activities of leukocyte enzymes (adenylate cyclase, ATPase, and phosphodiesterase) in relation to extensive lung function measurements performed the same day. Instruments include the standard biochemical and pulmonary function laboratory equipment. All data will be computerized and subjected to a variety of statistical analyses.

Findings: Certain unique enzyme abnormalities are detectable in leukocytes of subjects with asthma. These may relate to certain abnormal lung functions. This research may lead to improved management of asthma with drugs and the development of new drugs for treatment.

Duration: June 1971-May 1976.

Cooperating group(s): Department of Biochemical Pharmacology and Department of Clinical Physiology, National Asthma Center; National Institute of Allergy and Infectious Diseases, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: Coffey, R. G. and Middleton, E., Jr. Leukocyte Adenosine Triphosphatase (ATPase) activity in asthma: Effect of corticosteroid therapy. (Abstract) *Journal of*

Allergy and Clinical Immunology, 1974, 53, 98; Logsdon, P. J.; Carnright, D. V.; Middleton, E., Jr.; and Coffey, R. G. The effect of phentolamine on adenylate cyclase and on isoproterenol stimulation in leukocytes from asthmatic and nonasthmatic subjects. *Journal of Allergy and Clinical Immunology*, 1973, 52, 148; Smith, R. S.; Sherman, N. A.; and Middleton, E., Jr. Effect of hydrocortisone and isoproterenol on immunoglobulin synthesis by peripheral blood lymphocytes of patients with asthma. *Journal of Allergy and Clinical Immunology*, 1973, 51, 328.

33-GB-3 DEVELOPMENT OF SERUM IgE LEVELS AND ALLERGY IN EARLY CHILDHOOD

Investigator(s): Robert N. Hamburger, M.D., Professor and Head, Pediatric Immunology and Allergy Division, School of Medicine, University of California at San Diego, La Jolla, California 92037.

Purpose: To continue to study the relationship between the IgE (reaginic) antibody levels of children and their development of allergies and family allergy histories.

Subjects: 34 infants who were followed from birth through 22 months.

Methods: The infants participating in the original study will be followed and other children may be added. Methods to be used include assessment of quantitative IgE levels, medical histories, and physical examinations.

Findings: At 22 months of age, 11 of the 34 babies had developed serum IgE levels over 20 units/ml and 5 babies had levels over 100 units/ml. All 11 infants with IgE levels above 20 units/ml developed allergies from 1 to 9 months later. There was also highly significant correlation between an early increase in serum IgE level and the onset of allergic disease ($p<0.005$).

Duration: March 1974-February 1977.

Publications: Hamburger, Robert N. *et al.* Development of IgE and allergy during the first year of life: Preliminary data. (Abstract) *Journal of Allergy and Clinical Immunology*, February 1974, 53, 94.

33-GC-1 THE EFFECTIVENESS OF PARENT TRAINING ON THE COMMUNICATION SKILLS OF YOUNG SEVERELY HEARING IMPAIRED CHILDREN

Investigator(s): David M. Luterman, D.Ed., Professor; and Maria Haynes, M.A., Tutor, Department of Communication Disorders, Emerson College, 168 Beacon Street, Boston, Massachusetts 02116.

Purpose: To continue to study the comparative communication skills of children enrolled and not enrolled in a preschool parent centered program.

Subjects: 17 severely hearing impaired children: 11 boys and 6 girls, ages 5.11 to 9.2, who had been enrolled at a parent centered nursery when they were 2 years old; and a control group of 17 severely hearing impaired children: 11 boys and 6 girls, ages 6.8 to 9.5, who had not been enrolled in nursery school at age 2.

Methods: Using a matched group design, both groups of subjects were given subtests of the Illinois Test of Psycholinguistic Abilities, the Northwestern Sentence Syntax Test, the Peabody Picture Vocabulary Test, a speech sample, and teacher ratings.

Findings: Children who were enrolled in the parent centered program appear to have developed better language skills but not necessarily better speech skills. Apparently, the parent centered nursery program imparts some advantages to children enrolled in its program, but these advantages may be eliminated by subsequent schooling.

Duration: September 1971-completed.

Cooperating group(s): National Center for Educational Research and Development, Office of Education, U.S. Department of Health, Education, and Welfare.

33-GC-2 DEVELOPMENT OF LANGUAGE SKILLS OF HEARING IMPAIRED CHILDREN

Investigator(s): David M. Luterman, D.Ed., Professor, Department of Communication Disorders, Emerson College, 168 Beacon Street, Boston, Massachusetts 02116.
Purpose: To compare the language skills of hearing impaired children trained in a visual/oral method with the language skills of hearing impaired children trained in an auditory/oral method.
Subjects: 49 hearing impaired graduates of a preschool deaf nursery. The experimental group consists of 11 boys and 11 girls, mean age 5.11; and the control group consists of 18 boys and 9 girls, mean age 7.11.
Methods: An experimental group of 22 hearing impaired children received auditory/oral educational treatment, while a control group of 27 hearing impaired children received visual/oral educational treatment. Their performances on several language skills measures were compared.
Findings: Children receiving auditory treatment far exceeded visually treated children on all language measures.
Duration: 1972-1973.

33-GC-3 INCIDENCE, FAMILIAL PATTERNS, AND BEHAVIORAL CHARACTERISTICS OF CHILDREN WITH DEVELOPMENTAL APRAXIA OF SPEECH

Investigator(s): Kathe A. Yoss, Ph.D., Speech Pathologist, Section of Speech Pathology, Department of Neurology, Mayo Clinic, Rochester, Minnesota 55901.
Purpose: To determine epidemiology; familial patterns; intellectual ability; peripheral and central auditory processing; language abilities; developmental, medical, and academic histories; and past speech therapy techniques for children with developmental apraxia of speech.
Subjects: 8,100 elementary school children in Rochester, Minnesota. Group I consists of an unknown number of children with developmental apraxia of speech, matched by age, sex, and number to Group II, normal speaking children; and to Group III, children with developmental articulation problems with no evidence of a developmental apraxia of speech component.
Methods: Standardized and experimental batteries of tests were used to assess areas of developmental apraxia of speech, language, IQ, and audiological data. Developmental and medical history information was obtained through questionnaires and interviews. Interviews and speech samples for the siblings and parents of all groups were utilized to study familial patterns.
Duration: October 1973-winter 1974.
Cooperating group(s): Independent School District 535, Rochester, Minnesota; State Department of Public Welfare, Division of Crippled Children and Adults, St. Paul, Minnesota.

33-GC-4 APPRAISING CERTAIN LINGUISTIC STRUCTURES IN THE RECEPTIVE-SIGNING COMPETENCE OF DEAF CHILDREN

Investigator(s): Elaine Costello, Ph.D., Director, Curriculum Development and Research, Department of Continuing Education, Gallaudet College, Washington, D.C. 20002; and Gus Root, Ph.D., Professor, Area of Instructional Technology, Syracuse University, Syracuse, New York 13210.
Purpose: To study the problems of language assessment of deaf children.
Subjects: 10 deaf children, ages 4.0 to 6.5.
Methods: Biological and developmental language acquisition patterns were used as the framework for measuring receptive sign language abilities in three identifiable sign language varieties: American Sign Language, Sign English, and Manual English. Each child was tested at the Maryland School for the Deaf in Frederick. The test consisted of a videotape of randomly ordered constructions in three sign language varieties. These constructions were taken from Bellugi-Klima's (1971) suggestions for measuring linguistic development. The deaf child responded to each language construction on the videotape by manipulating objects to demonstrate his comprehension of that construction. Two pilot studies of four children each were used in order to determine test reliability and validity. In addition to the test results, information was recorded for each child, including his sex, degree of hearing loss, etiology, presence of parental hearing loss, method of communication used at home, and educational background. Depth descriptions of the test responses of the children in the final study will be included in the report of results. Also, the concepts of multiple linear regression analysis were used as a conceptual structure for examining variables that contribute to linguistic development.
Duration: January 1974-July 1974.
Cooperating group(s): Linguistics Research Laboratory, Gallaudet College, Washington D.C.
Publications: The data and results of this investigation are available from the investigators.

33-GC-5 LANGUAGE SOCIALIZATION IN THE CLASSROOM

Investigator(s): Carol Erting, M.A., Linguistics Research Laboratory, Gallaudet College, Washington, D.C. 20002.
Purpose: To study communication patterns of children in a preschool classroom for the deaf; and specifically, to determine (when one deaf adult and one hearing adult are present) if there is a discernible difference between the communication involving the children and the deaf adult and the children and the hearing adult.
Subjects: Eight deaf preschool children, ages 4 to 5, four with deaf parents and four with hearing parents.
Methods: Varieties of American Sign Language, Pidgin Sign Language, and Manual English are used in the classroom. The preschoolers were videotaped over a period of 3 weeks in a variety of everyday situations at school. The preschool teacher who could hear reviewed the data with a deaf assistant to obtain transcriptions of communication interaction. Tapes were analyzed according to the number and kinds of communicative interactions which occurred between the children and each adult. Numerical weightings were assigned to each interchange or attempted interchange and an average communication exchange score was obtained.
Findings: Initial findings on one 5-minute segment of videotape indicates that there is a difference in the kinds of interchanges which occur between the children and the deaf adult and between the children and the hearing adult. In this sample, children were able to carry on more extended conversations with the deaf assistant than with the hearing teacher.
Duration: March 1974-August 1974.

Cooperating group(s): Atlanta Area School for the Deaf, Georgia.
Publications: Results will be available from the Linguistics Research Laboratory, Gallaudet College, Washington, D.C. 20002.

33-GC-6 NEUROPSYCHOLOGICAL STUDIES OF CHILDREN WITH ACUTE AND CHRONIC BRAIN INSULTS

Investigator(s): Aaron Smith, Ph.D., Director, Neuropsychological Laboratory, University of Michigan Medical School, 1111 East Catherine Street, Ann Arbor, Michigan 48104.
Purpose: To define the initial and later effects of hemispherectomy and other brain lesions on the organization, disorganization, and reorganization of brain functions.
Subjects: 40 children with left or right hemispherectomy for infantile hemiplegia or for tumor.
Methods: A standardized neuropsychological test battery is administered which includes comprehensive measures of higher level cerebral functions (cognitive, memory, and language) and lower level cerebral functions. Follow-up studies are conducted at fixed intervals to yield data on the nature of initial and later effects of hemispherectomy and on the developmental capacities and limitations of a single residual left or right hemisphere.
Findings: One intact hemisphere, either the right or left, will suffice for the development of normal language and intellectual capacities following hemispherectomy for early brain insult.
Duration: 1966-continuing.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare; National Institute of Neurological Diseases and Stroke, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.
Publications: Smith, Aaron. *Neuropsychological sequelae of right and left hemispherectomy.* Tokyo, Japan: Proceedings, XXth International Congress of Psychology, 1972. Pp. 293-294 and 518; Smith, Aaron. Dominant and nondominant hemispherectomy. In W. L. Smith (Ed.), *Drugs, development, and cerebral function.* Springfield: Charles C. Thomas, 1972. Pp. 37-68.

33-GD-1 MUSCULAR FACTORS IN HIP DYSPLASIA

Investigator(s): J. V. Basmajian, M.D., Director, Emory University, Regional Rehabilitation Research and Training Center, 1256 Briarcliff Road, N.E., Atlanta, Georgia 30306.
Purpose: To establish the role of muscle forces in the etiology of hip dysplasia.
Subjects: 25 boys and girls with spastic cerebral palsy, over 8 years old.
Methods: The hypothesis that muscular imbalance causes hip dysplasia and hip dislocations will be tested by comparing the differences between subjects susceptible to hip disorders with previous normal findings. Subjects prone to hip dislocations are compared to normal subjects of matching age on the basis of electromyographic activity of the muscles that control the hip joint. Muscle electricity is picked up by means of electrodes injected deep into the muscles. Data are reduced to numerical form by computer. Simultaneous viodeotaping provides behavioral data that can be correlated with electromyographic data.
Duration: July 1972-June 1975.
Cooperating group(s): Division of Research, Maternal and Child Health, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare; Crippled Children's Services.

33-GE-1 THE TREATMENT OF ASTHMA WITH BEHAVIOR THERAPY

Investigator(s): A. B. Alexander, Ph.D.; T. L. Creer, Ph.D.; D. R. Miklich, Ph.D.; and C. M. Renne, Ph.D., Research and Clinical Psychologists, Children's Asthma Research Institute and Hospital, 3401 West 19th Avenue, Denver, Colorado 80204.
Purpose: To assess the effectiveness of using systematic desensitization as a treatment for asthma.
Subjects: 80 chronic asthmatic boys and girls, ages 6 to 15, in residence at the Children's Asthma Research Institute and Hospital in Colorado.
Methods: Half of the children were treated with systematic desensitization, while the other half composed a no treatment control group. The study involved high frequency measurement of pulmonary physiology. Cross-validation by treatment of the control group is planned.
Duration: January 1972-December 1974.
Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare.

33-GE-2 EDUCATIONAL EVALUATION OF THE OPTACON (OPTICAL-TO-TACTILE CONVERTER) AS A READING AID TO BLIND ELEMENTARY AND SECONDARY STUDENTS

Investigator(s): Robert A. Weisgerber, Ed.D., Principal Research Scientist, American Institutes for Research, P. O. Box 1113, Palo Alto, California 94302.
Purpose: To develop appropriate instructional materials for blind students; to conduct an investigation of the reading outcomes (rate, accuracy, variety) for students in public and residential schools; to identify learner characteristics associated with effective learning with the Optacon; and to suggest instructional considerations and configurations which may limit or enhance learning to use the Optacon.
Subjects: 71 blind boys and girls, grades 4 to 12; and 10 special cases, students from grades 1 to 12 who failed to meet the criteria for involvement in the main study; e.g., multiply handicapped, too young, non-braille readers.
Methods: Various measures of learner characteristics were obtained before instruction in 15 cooperating school districts. A monitoring system was set up to keep track of learner progress on a unit-by-unit basis. An interim criterion assessment was made after an average of 24 hours of exposure, spaced over one semester. Treatment groups included individual and small group instruction, student teachers and credentialed teachers, elementary grades 4 to 8, and secondary grades 9 to 12.
Findings: Intelligence and tactile-kinesthetic ability appear significantly related to Optacon proficiency. Criterion reading accuracy was extremely high for all subjects, and the average reading rate attained was approximately 6½ WPM. Except for accuracy of reading, the levels of skills developed by alternative treatment groups did not differ markedly.
Duration: June 1972-September 1974.
Cooperating group(s): Bureau of Education for Handicapped, Office of Education, U.S. Department of Health, Education, and Welfare.
Publications: Weisgerber, R. A.; Crawford, J. J.; Everett, B. E.; Lalush, S. E.; and Rodabaugh, B. J. *Educational evaluation of the Optacon (optical-to-tactile converter) as a reading aid to blind elementary and secondary students.* Interim Technical Report, Phase I. Palo Alto, California: American Institutes for Research, September 1973.

33-GE-3 CLINICAL RESEARCH PROGRAM IN ORAL-FACIAL COMMUNICATIVE DISORDERS

Investigator(s): H. K. Cooper, Sr., D.D.S., D.Sc., Emeritus Director, Lancaster Cleft Palate Clinic, 24 North Lime Street, Lancaster, Pennsylvania 17602.

Purpose: To improve the clinical care and habilitation of children with cleft lip, cleft palate, or both.

Subjects: The Lancaster Cleft Palate Clinic serves and studies several groups including (1) 350 children in the Research Series (enrolled at birth); (2) Clinic Series: 1,500 children with cleft lip or cleft palate; and (3) 200 postoperative cleft adults, their siblings, and a national noncleft group, ages 24 to 53.

Methods: The Lancaster Cleft Palate Clinic is an interdisciplinary group working in plastic surgery, dentistry, genetics, speech, hearing, growth and development, and psychosocial services. Data from each of the disciplines are analyzed and researched to test various hypotheses of age-and-sex related interrelationships in the care and habilitation of children with varying types and degrees of clefting. The children in the Research Series are seen serially (at ages 3 months, 6 months, and from 1 to 8 years) and by members of all the disciplines at each visit. They are classified by cleft type, time and kind of operative procedures (lip, palate), age, and sex. X-ray headfilms, dental models, facial cast, health and operative histories, height, weight, genetic pedigree, ear pathology, audiometric records and familial socioeconomic inventories are gathered on each child. The sociologic noncleft control data, which are used to study psychosocial adjustment in adults, were gathered from eight United States areas by a professional computer organization. The usual X-ray equipment, cineradiography, serial dental models, serial ear examinations and audiometric readings, and genetic pedigree provide the ongoing data for research into age progress and/or age changes for each area, and then are synthesized to give an understanding of the individual whole child.

Findings: In the morphological area, in the Research Series, it was discovered that with conservative surgery (lip closures at 3 +/-1 months, palate closure at 14 +/-2 months) growth in the oropharyngeal area is not inhibited or deviated by surgery. By the age of 6 to 8, the total facial configuration (skeletal and soft tissues) is within the normal range of variation for age and sex (according to the Bolton Roentgenographic Cephalometric Standard). In the psychosocial area, it was found that operated cleft patients marry at a significantly lower rate when compared with sibling and control groups. With respect to education in the three groups, there was near unity for educational attainment; cleft subjects had a significantly lower aspiration level for further education.

Duration: July 1963-December 1977.

Cooperating group(s): National Institute of Dental Research, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: Krogman, W. M. The role of genetic factors in the human face, jaws, and teeth: A review. *Eugenics Review*, September 1967, 59(3), 165-192; Krogman, W. M. Craniofacial growth and development: An appraisal. *Journal of the American Dental Association* (Special Issue), October 1973, 87, 1037-1043; Cole, Richard M. Early treatment of cleft lip and palate. *Proceedings of the 2nd International Symposium, April 19-20, 1969*. Chicago, Illinois: Cleft Lip and Palate Institute, Northwestern University Dental School, 1970; Mazaheri, M.; Johnson, M. C.; Niswander, J. D.; Harding, R. L.; and Bariana, G. S. Changes in arch form and face width related to lip and palate surgery, a paper presented to the American Cleft Palate Association, Pittsburgh, 1971.

33-GE-4 MODIFICATION OF SIGN LANGUAGE FOR DEAF PRESCHOOL CHILDREN

Investigator(s): Harry Bornstein, Ph.D., Research Professor, Department of Psychology, Gallaudet College, 7th and Florida Avenue, N.E., Washington, D.C. 20002.
Purpose: To evaluate a manual supplement for speech intended to further the English language development of deaf preschool children.
Subjects: 60 to 100 deaf preschool boys and girls, ages 6 months to 6 years.
Methods: Language samples, demographic data, and rates will be collected. A more detailed design will be determined during the first year of preliminary data collection.
Duration: 1971-1977.
Cooperating group(s): Office of Education, U.S. Department of Health, Education, and Welfare; Maryland School for the Deaf; Prince Georges School System; Gallaudet Preschool.
Publications: For a description of some current sign systems designed to represent English: *American Annals of the Deaf*, 1973, 118, 454-470; and *Basic Pre-School Signed English Dictionary*, Washington, D.C.: Gallaudet College Press, 1973; Signed English: A manual approach to English language development. *Journal of Speech and Hearing Disorders*, (in press).

33-GE-5 COMPRESSIVE CRANIAL WRAPPING

Investigator(s): Fred Epstein, M.D., Assistant Professor, Department of Neurosurgery, New York University Medical Center, 550 First Avenue, New York, New York 10028.
Purpose: To develop a treatment of neonatal hydrocephalus which involves an attempt to alter the cerebrospinal fluid dynamics in a way that will lead to decompensation of the disease.
Subjects: 15 hydrocephalic children, ages 2 weeks to 3 months.
Methods: The subjects were treated by wrapping the head with an elastic bandage. This treatment is based on the premise that increasing the resistance to expansion of the skull by compressive bandaging promotes increased cerebrospinal fluid absorption, presumably by transventricular pathways. Each child's bandage was removed periodically to inspect the scalp and prevent the development of pressure ulceration. During and after treatment each child was monitored with regard to intracranial pressure.
Findings: Increasing intracranial pressure increases spinal fluid absorption and in select cases arrests the progression of hydrocephalus.
Duration: November 1972-continuing.
Cooperating group(s): Spina Bifida Clinic, New York University.
Publications: Epstein, F.; Hochwald, G. M.; and Ranschoff, J. Neonatal hydrocephalus treated by compressive head wrapping. *The Lancet*, March 24, 1973, pp. 634-636.

33-GE-6 EVALUATION OF HEAD START EFFORTS ON BEHALF OF THE HANDICAPPED

Investigator(s): Alan F. Bogatay, M.A., Director; and Selcuk Ozgediz, M.A., Co-Manager of Head Start Project, Policy Research Incorporated, Commerce Center Building, Suite 1204, Lansing, Michigan 48933; and Gail Ensher, Ed.D., Assistant Professor; Burton Blatt, Ed.D.; Robert Bogdan, Ed.D.; and Daniel Sage, Ed.D., Head Start Project staff members, Division of Special Education and Rehabilitation, Syracuse University, 805 South Crouse Avenue, Syracuse, New York 13210.
Purpose: To design and implement an information system and to collect data for report-

ing annually to Congress on the status of the handicapped effort in Head Start; to develop methods of estimating costs of services to the handicapped; to compile information for decision making and policy formulation for the Office of Child Development; to assess and develop case studies of experimental and selected other Head Start programs serving the handicapped; and to develop strategies for impact evaluation.
Subjects: Head Start projects throughout the United States.
Methods: Each of the objectives of this study has required a different plan and approach. Among others, these have included the development of a full-year questionnaire which was sent to 1,353 Head Start programs and on-site visits to approximately 65 Head Start programs and 10 exemplary projects serving moderately to severely impaired children.
Duration: June 1973-October 1974.
Cooperating group(s): Office of Child Development, U.S. Department of Health, Education, and Welfare.

Mentally Retarded

33-HA-1 A NATIONWIDE ATTITUDINAL SURVEY ON THE SUBJECT OF MARRIAGE AND STERILIZATION FOR THE RETARDED

Investigator(s): Curtis H. Kirshef, Ph.D., Associate Dean; and John B. Phelps, B.A., Research Fellow, School of Social Work, Florida State University, Tallahassee, Florida 32306.
Purpose: To determine the attitudes of parents and interested nonparents regarding marriage and sterilization of the mentally retarded.
Subjects: 4,800 members of the National Association for Retarded Citizens.
Methods: A fixed-choice, 18-item questionnaire was mailed to a random sample of 4,800 members of the National Association for Retarded Citizens (NARC) throughout the United States. Sampling procedures insured that at least one member from each local NARC unit (approximately 1,500 local units) received a questionnaire. Local units which had larger membership rolls received proportionally more questionnaires. A total of 1,515 properly completed questionnaires were returned. The data were analyzed by chi-squares.
Findings: Nearly 74 percent of the parents of retarded children felt that their child should not be allowed to marry, and 91 percent of the parents did not feel that their child could capably rear his or her own children. The majority of parents (55 percent) indicated that it would be best for their child to be sterilized whether or not the child married, and 72 percent responded that premarital sterilization would be best if their child decided to marry. Of all respondents, both parents and nonparents, 67 percent approved of sterilization for the retarded if this decision were considered on an individual basis. In addition, 41 percent of both parents and nonparents felt that the retarded should be allowed to marry only if they agreed to be sterilized, but 57 percent were opposed to sterilization as a required procedure before releasing retarded individuals from an institution.
Duration: May 1973-May 1974.
Cooperating group(s): President's Committee on Mental Retardation; National Association for Retarded Citizens.

33-HB-1 THE KAUAI STUDY: FOLLOW-UP AT ADOLESCENCE

Investigator(s): Emmy E. Werner, Ph.D., Professor, Department of Applied Behavioral Sciences, University of California at Davis, 209 Walker Hall, Davis, California 95616.
Purpose: To continue to study a cohort of adolescents; to assess the long-term consequences of the behavior and learning disorders which were diagnosed by age 10, in order to identify additional behavior and learning disorders that have developed in the interval between 10 and 18 years; and to evaluate the predictive validity of early diagnostic signs from records obtained at birth, age 2, and age 10.
Subjects: 650 multiracial children, who were born in 1955 on the Island of Kauai, Hawaii.
Methods: The follow-up study design involves a study of the children through available school, health, and social service records and three group tests: Cooperative School and College Ability Test (SCAT), Sequential Test of Educational Progress (STEP), and the Adjective Checklist. In addition, an in-depth study will be conducted through interviews and diagnostic tests of a group of 150 to 200 high risk children, including (1) those who had been diagnosed in need of long-term mental health services at age 10; (2) those who had been diagnosed as having the minimal brain dysfunction (MBD) syndrome and were in need of learning disability classes at age 10; and (3) youth without problems at age 10, in whom serious behavior and/or learning disorders had developed by age 18. Control groups of children without problems between ages 10 and 18 were matched with subjects by sex, socioeconomic status, ethnic group, and intelligence level. Comparisons will be made of the status of the MBD children and children with mental health problems, both treated and untreated, at age 18, and of youngsters whose behavior and learning problems persisted, whose status improved, and whose status deteriorated.
Duration: January 1973-December 1974.
Cooperating group(s): Division of Research, Maternal and Child Health, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; Crippled Children's Services; Kauai Health, Education, and Welfare Council, Hawaii.
Publications: Werner, E. E. From birth to latency: Behavioral differences in a multiracial group of twins. *Child Development,* September 1973; Werner, E. E.; Bierman, J.; and French, F. *The children of Kauai: A longitudinal study from the prenatal period to age ten.* Honolulu: University of Hawaii Press, 1971.

33-HB-2 USES OF A REFERRAL AND BEHAVIOR RATING SCALE FOR THE RETARDED CHILD IN CLINICAL SETTINGS

Investigator(s): Rolf Peterson, Ph.D., Associate Professor; and Roberta Barker, M.A., Department of Psychology, University of Illinois at Chicago Circle, Box 4348, Chicago, Illinois 60680.
Purpose: To evaluate the usefulness of the Peterson-Gorski Referral and Rating Form for Trainable Children in clinical use.
Subjects: 36 mentally retarded children, ages 2 to 10, seen in a diagnostic center and evaluated for mental retardation placement.
Methods: A subjective report of the role of the Peterson-Gorski Referral and Rating Form was included in an assessment and recommendations report. IQ scores and developmental level judgments were compared.
Findings: The form provided important inputs into the psychological evaluation of mentally retarded children and aided in the development of profiles.
Duration: June 1972-completed.
Cooperating group(s): Diagnostic center, Chicago Association for Retarded Children.
Publications: Peterson, R. A.; Gorski, S.; and Kreisman, R. L. A referral and rating form for trainable children. *Exceptional Children,* September 1973, p. 36.

33-HC-1 THE PERCEPTION OF TIME

Investigator(s): Richard M. Sanders, Ph.D., Professor, Rehabilitation Institute, Southern Illinois University, Carbondale, Illinois 62901.
Purpose: To investigate the relationship between IQ and/or level of mental retardation, age, etc. versus performance ability on a simple timing task.
Subjects: Approximately 200 mentally retarded boys and girls, ages 8 to 18, in an Illinois institution.
Methods: The timing task is defined by a differential reinforcement of low rate (drl 10"). Two to four 20-minute sessions will be conducted with each child, in which the child works for candy or trinkets. The obtained performance data will be correlated with level of retardation and age variables.
Duration: January 1974-September 1974.
Cooperating group(s): A. L. Bowen Children's Center, Harrisburg, Illinois.

33-HE-1 A DEVELOPMENTAL APPROACH TO TEACHING SYNTAX AND STIMULATING LANGUAGE IN MODERATELY MENTALLY HANDICAPPED CHILDREN

Investigator(s): Margery L. Rieff, M.S., Research Psychologist, Julia S. Molloy Education Center, 8701 North Menard, Morton Grove, Illinois 60053.
Purpose: To determine the effectiveness of a syntactically-based language curriculum for mentally handicapped children; and to test the hypothesis that students who received language training with the language story curriculum would improve in their use of more difficult grammatical structures and spontaneous language.
Subjects: 32 subjects, ages 5 to 14, whose IQ scores on standardized tests ranged from 35 to 66.
Methods: Subjects, matched according to chronological age and IQ, were randomly assigned to an experimental group (language stories) and a control group (no language stories). Subjects were pre- and posttested on a spontaneous language sample and on a criterion-related language story test. Experimental subjects received 5 months of language stimulation on the language stories. Employing the Developmental Sentence Scoring Chart (Lee, 1972) and Laura Lee's Language Story format, the stories were written at appropriate developmental, syntactical levels with controlled vocabulary, concepts, and grammatical structures to minimize receptive language demands and maximize interest level.
Findings: The experimental subjects appeared to improve more on the spontaneous language sample. Experimental subjects did significantly better than the control subjects on the criterion-related language story test (Sign test, $p<.05$). Further investigation into the effectiveness of the stories is in progress with a larger sample size (60 subjects).
Duration: August 1972-June 1974.
Cooperating group(s): Ben Levin Memorial Foundation for Retarded Children.

33-HE-2 THREE DIAGNOSTIC PATTERNS FOR CHILDREN WITH READING DISABILITIES

Investigator(s): Gerald B. Fuller, Ph.D., Director, Psychology Center, Department of Psychology, Central Michigan University, Sloan Hall, Mt. Pleasant, Michigan 48859.
Purpose: To refine testing procedures to arrive at better diagnostic decisions concerning children who have reading disabilities; to establish subgroups or types of performance behaviors of reading disabilities, in sensory areas other than visual-motor; and to establish the relationships of the test performance of subgroups with classroom learning-reading performance to facilitate recommendations for prescription.

Subjects: 172 boys and girls with reading problems.

Methods: The Minnesota Percepto-Diagnostic Test was administered to all the subjects to assess their visual perception and visual motor abilities. On the basis of the children's performance on this test, they were placed in one of three groups: primary reading retardation, secondary reading retardation, and reading retardation associated with brain damage. The children were also administered the Wechsler Intelligence Scale for Children, Illinois Test of Psycholinguistic Abilities, Hawthorne Concepts Symbolization Test, Wide Range Achievement Test, and Durrell Analysis of Reading Difficulty. The performances of the three subgroups of children on these tests were then studied to determine if distinct, unique behavioral patterns or profiles could be established.

Findings: The results supported the concept that the three subgroups of readers have a number of unique behavioral characteristics. The primary group has basically an auditory deficit with an additional weakness in the association level (the ability to relate concepts presented auditorily and visually). This auditory deficit and association difficulty is reflected in a weakness of verbal expression channels rather than in manual expression channels. The secondary group showed less deficits and severity of function on most of the variables than the other two groups. This group appeared to be highly prone to anxiety, tension, and frustration which was expressed in a general distractibility or attention span problems. The secondary group was also lower on verbal expression than average. This seems to be caused by anxiety in having to give an oral or verbal response rather than by a reception or memory problem. The third group generally was more pervasive and encompassing in their deficits, exhibiting, both auditory and visual problems, and at different levels (reception, association, expression). Their scores were significantly lower than the other two groups on manual expression. The motor element and verbal expression are also impaired for this group.

Duration: September 1973-January 1974.

Publications: Paper presented at the 1974 International Conference of the Association for Children with a Learning Disability, Houston, Texas: Fuller, Gerald B. Three diagnostic patterns for children with reading disabilities; Fuller, Gerald B. Three categories of visual-motor performance of children with a reading disability and their theoretical implications. *Psychology in the Schools,* January 1973, 10, 19-23.

33-HF-1 NATIONAL COLLABORATIVE PKU STUDY

Investigator(s): Robert Warner, M.D., Medical Director, Children's Rehabilitation Center and Buffalo Diagnostic and Counseling Study Center for Mentally Retarded, 936 Delaware Avenue, Buffalo, New York 14209.

Purpose: To test the value of early identification, good monitoring, and proper treatment for the prevention of mental retardation and the preservation of normal intellect in children with phenylketonuria and phenylalanemia.

Subjects: Neonates selected by screening in the first 3 months of life and confirmed as having phenylketonuria according to the criteria of the National Collaborative Study.

Methods: The neonates were divided into two test groups: Test Group I (TG1, levels 1.5–5.5) and Test Group II (TG2, levels 5.5–10). The test groups received constant monitoring and their diets were recorded. Two control groups were used: untreated siblings (CG1) and normal siblings (CG2). Nonstudy children (those not included in the national study) were maintained indefinitely on levels of 2-4.

Findings: There were no significant differences between the two treatment groups and the control group of normal siblings. All the children fall in the normal range of intelligence. However, the control group of untreated siblings definitely falls in the retarded range.

Duration: July 1967-continuing.

Cooperating group(s): Thirteen cooperating clinics; Drs. Guthrie and Murphy Laboratories, University of Buffalo.

33-HG-1 MENTAL DEVELOPMENT IN CHILDREN WITH MOSAIC DOWN'S SYNDROME

Investigator(s): Karol Fishler, Ph.D., Chief Clinical Psychologist, Division of Child Development, Children's Hospital of Los Angeles, P. O. Box 54700, Los Angeles, California 90054.

Purpose: To assess early developmental progress and subsequent intellectual status in mosaic Down's Syndrome individuals, with special reference to their school achievements and personality aspects.

Subjects: 20 boys and girls, ages 4 to late adolescence, with known mosaic Down's Syndrome (verified by chromosome analysis).

Methods: Each child with known mosaic Down's Syndrome will be matched by age and sex with a trisomy 21 Down's Syndrome (have a known N = 270+). The results on standardized intelligence tests (Stanford-Binet Intelligence Scale for Children, Wechsler Intelligence Scale for Children), depending on child's age, will be compared by statistical means.

Findings: Preliminary data based on 15 mosaic Down's Syndrome subjects reveal higher intellectual potential than one typically noted in a trisomy 21 subject. There is also better speech development and small degree of visual-perceptual limitations.

Duration: September 1973-December 1974.

Publications: A preliminary report was presented at the Down's Syndrome Conference: Research, Treatment, Prevention (Disneyland, Anaheim, California, October 1973).

33-HH-1 PRESCHOOL EDUCATION PROGRAMS FOR SEVERELY HANDICAPPED CHILDREN

Investigator(s): Lou Brown, Ph.D., Associate Professor; Robert York, M.S., Research Assistant; and Eve Gadberry, M.S., Research Assistant, Department of Studies in Behavioral Disabilities, 427 Education Building, University of Wisconsin, Madison, Wisconsin 53706; and Cathy Hunt, B.S., Teacher; and Jacalyn Stengert, B.S., Teacher, Madison Public Schools, Madison, Wisconsin; and R. C. Scheerenberger, Ph.D., Superintendent, Central Wisconsin Colony and Training School, 317 Knutson Drive, Madison, Wisconsin 53704.

Purpose: To develop preschool education programs to prepare institutionalized severely mentally and physically handicapped children for community placement and public school special education classes.

Subjects: Seven boys and six girls, ages 3 to 9, who are severely or profoundly retarded and who often have multiple handicapping conditions.

Methods: A single subject research design was used, employing response by response data to evaluate child learning and effectiveness of instruction.

Findings: Significant gains in academic, social, and self-help areas have been realized by the children. Placement of four children in foster homes has been successful, and placement of additional children is anticipated.

Duration: August 1973-June 1974.

Cooperating group(s): Waisman Center on Mental Retardation and Human Development; Bureau of Education for Handicapped, Office of Education, U. S. Department of Health, Education, and Welfare.

Publications: A paper presented at the 52nd Annual International Convention of the Council for Exceptional Children: York, Robert *et al.* Preschool education programs to prepare institutionalized severely handicapped children for community placement and public school special education classes.

33-HH-2 SELECTED DEMOGRAPHIC AND SOCIOECONOMIC VARIABLES AND READING DISABILITY IN HIGH GRADE MENTAL RETARDATES

Investigator(s): Sudhansu B. Mitra, Ph.D., Associate Professor and Chairman, Department of Rehabilitation Counseling, Coppin State College, 2500 West North Avenue, Baltimore, Maryland 21216; and Samuel A. Saltsman, Jr., M.A., Pupil Personnel Services, Anne Arundel County School System, Green Street, Annapolis, Maryland 21401.
Purpose: To identify which of a select group of demographic and socioeconomic variables significantly differentiate the low average from the defective in reading achievement among educable mentally retarded children for placement in the regular class.
Subjects: 36 elementary school children, 11 girls and 25 boys, ages 7.5 to 13.3, with IQs of 55 to 75, who attend special classes for the educable mentally retarded.
Methods: Based on the classifying system of the Wide Range Achievement Test reading scores, the subjects were divided into two groups: Low Average (17 subjects) and Defective (19 subjects). The socioeconomic status of the subjects was assessed by the Warner, Meeker, and Eells Scale. The statistical analysis was carried out in three stages: (1) t-tests and chi-square tests to determine if there were any significant differences between the two groups, (2) intercorrelations of the variables to determine any significant relationships with the reading criterion, and (3) stepwise regression analysis between the predictor variables and reading achievement.
Findings: No predictor variables having a significant correlation with the reading criterion were identified. However, the study pointed out that language facility of the parents (represented by father's education, mother's education, and interview time combined with the sociomedical factor of birth site) is indicative of the reading potential of educable mentally retarded children.
Duration: September 1972-completed.
Publications: A paper presented at the 51st Annual International Convention of the Council for Exceptional Children, Dallas, Texas, April 1973: Mitra, Sudhansu B. Selected demographic and socioeconomic variables and reading disability in high grade mental retardates. Copies of the paper are available from the investigator.

Emotionally Disturbed and Mentally Ill

33-JA-1 SCREENING FOR EMOTIONAL DISORDERS IN MASSACHUSETTS SCHOOL CHILDREN

Investigator(s): Morton Beiser, M.D., Associate Professor, Department of Behavioral Science, Harvard School of Public Health, 677 Huntington Avenue, Boston, Massachusetts 02115; and Peter Choras, M.D., Deputy Assistant Commissioner, Children's Services, Massachusetts Department of Mental Health, Boston, Massachusetts 02115.
Purpose: To develop a set of easily administered, reliable, and valid screening instruments to assess emotional disorders in school children in order to (1) assess needs for mental health services, (2) plan and allocate resources, (3) eventually help in assessing the effectiveness of these services, and (4) provide data for the implementation of new remedial education legislation in Massachusetts.
Subjects: 1,200 children in grades 1, 4, and 8 from three school systems in Massachusetts.
Methods: Several different screening instruments are used: teacher ratings, pupil self-reports, peer ratings, and independent ratings of children by fathers and mothers. Assessment includes noticing indicators of positive adaptation as well as indicators of emotional disturbance. Clinical assessments of part of the sample are made by child psychiatrists or psychologists using a standardized assessment procedure.

Findings: Scales have been generated from the data for assessing children on such dimensions as abilities, work habits, imaginativeness, vocabulary skills, overactivity, and affability. Comparisons among the different instruments are being made.
Duration: January 1972-September 1974.
Cooperating group(s): Departmen of Educating School Systems, Malden, Greenfield, and Worcester, Massachusetts; Childre 's Hospital Medical Center, Boston, Massachusetts; Massachusetts Department of Special Education.

33-JA-2 SURVEY OF TRAITS AND CHARACTERISTICS OF CHILDREN IN STATE MENTAL HEALTH AND CORRECTIONAL FACILITIES

Investigator(s): Austin E. Grigg, Ph.D., Dean, Graduate School; and William E. Walker, Ph.D., Assistant Professor, Department of Psychology, University of Richmond, Richmond, Virginia 23173; and Richard Zonderman, M.A., Psychological Assistant, Virginia Department of Mental Health, State Capitol, Richmond, Virginia 23219.
Purpose: To survey all children, ages 8 to 16, in Virginia industrial schools and state mental health institutions to determine if these institutions house similar or different clinical populations insofar as personality is concerned.
Subjects: Approximately 2,200 children, ages 8 to 16, assigned to all correctional and mental health facilities in Virginia.
Methods: All of the children between ages 8 and 16 in state correctional and mental health facilities will be surveyed. A traits and characteristics checklist was devised for use by treatment teams in order to rate each child on behaviorally manifested responses and traits. The rating form will be completed on each child. Then, the results will be studied by computer analysis to ascertain differences by agencies, by facilities, by sex, and by other relevant characteristics in client populations.
Duration: January 1974-July 1974.
Cooperating group(s): Virginia Department of Mental Health and Virginia Department of Corrections, Youth Services Division, Richmond, Virginia.

33-JB-1 INSTITUTIONALIZATION AND BEHAVIOR PROBLEMS OF ADOLESCENTS

Investigator(s): Stephan R. Bollman, Ph.D., Associate Professor; Virginia M. Moxley, M.S., Research Associate; and Dona P. Heiman, B.S., Research Assistant, Department of Family and Child Development, Kansas State University, Justin Hall, Manhattan, Kansas 66502.
Purpose: To identify patterns of family interaction and behavior problems of adolescent patients in a state mental hospital.
Subjects: 39 institutionalized adolescents, 12 females and 27 males; and 59 parent figures from 38 families in nonmetropolitan midwest communities.
Methods: Adolescents and parents were interviewed in a case study approach to develop family profiles. Characteristics considered included family size and mobility, parents' marriages pattern, and reason for the adolescents' referral to the hospital.
Findings: Families of the institutionalized adolescents were characterized by multiple marriage of parents, large size, and mobility of family members. Adolescents were most often referred to the hospital because of behavior problems such as running away, repeated contacts with police, school problems, or parent-child conflicts.
Duration: January 1972-completed.
Cooperating group(s): Larned State Hospital, Larned, Kansas; Kansas Agricultural Experiment Station, Kansas State University, Manhattan, Kansas.

Publications: Family backgrounds of emotionally disturbed children. *Home Economics Research Journal,* June 1973, 1(1).

33-JE-1 AFFECT DEVELOPMENT IN AUTISTIC CHILDREN

Investigator(s): William B. Jennings Jr., Ph.D., Division of Psychological Services, Memphis Board of Education, 2597 Avery Avenue, Memphis, Tennessee 38112.
Purpose: To study affect development in children; and to determine if there is a basic disability in autistic children's expression and comprehension of emotions that cannot be explained by any cognitive defect theory of autism.
Subjects: Three groups of 11 subjects each, matched for mental ability:(1) autistic according to Rimland's criterion, (2) mentally retarded, and (3) normal. Ages of autistic subjects are 6 to 11 years.
Methods: The design was based on Carroll Izard's theory of emotion. The task, devised by Izard and Savitsky, consisted of photographs of facial expressions. Subjects chose the two out of three photographs (mounted on a card) that were the same or almost the same. There were three kinds of cards in which the choices were either (1) clothing accessories, (2) facial expression, or (3) both clothing accessories and facial expression. In the latter case, the subject's choice indicated the dimension which the subject considered to be the most important basis of "same."
Findings: Autistic children could pair on the basis of facial expressions as well as the normal and mentally retarded subjects, when facial expressions were the only logical basis of pairing. But, when accessories and expressions were both possible bases of choice, the autistic child chose accessories significantly more. This was considered to indicate a lack of appreciation of facial expressions as a means of emotional communication.
Duration: April 1972-completed.

33-JG-1 ANALYSIS OF CHILD OUTPATIENT TREATMENT EFFECTIVENESS

Investigator(s): William H. Miller, Ph.D., Assistant Professor, Department of Psychiatry, Neuropsychiatric Institute, University of California at Los Angeles, Los Angeles, California 90024.
Purpose: To develop and test procedures that can provide effective child mental health care with a minimum of professional time and effort; and to develop procedural manuals for family assessment, intervention, and follow-up that will be widely applicable for child outpatient treatment facilities.
Subjects: Approximately 100 subjects: 40 normal children and 60 child outpatient clinic applicants, ages 3 to 9.
Methods: The primary groups studied include (1) clinic families treated by group and individual parent behavioral training *or* regular individual child psychotherapy, and (2) families with no psychiatric history. Data were collected primarily through home interaction observations. An outcome predictor, Responsivity Index of Parents, was used, and the data were analyzed through regression techniques, primarily discriminant fuction analysis.
Findings: Seventy to 80 percent of families' responses to treatment is predictable using a maternal-MMPI (Minnesota Multiphasic Personality Inventory) predictor and one-of-four outcome categories. Twenty to 30 percent of families significantly improves through automated videotape feedback training of the deviant child's mother. The home data collection system is sensitive to basic relationship variables between the children and parents.
Duration: 1970-1975.

33-JH-1 LEAD AND HYPERACTIVITY

Investigator(s): Oliver David, M.D., Assistant Professor; Stanley Hoffman, Ph.D., Assistant Professor; Jeff Suerd, M.D., Instructor; Julian Clark, M.D., Assistant Professor; and Kytja Voeller, M.D., Assistant Professor, Department of Psychiatry, Downstate Medical Center, State University of New York, Box 1195, 450 Clarkson Avenue, Brooklyn, New York 11203.
Purpose: To study the relationship that exists between lead and hyperactive behavior and associated neurologic and psychologic sequelae.
Subjects: Approximately 250 hyperactive children, predominantly boys, ages 4 to 12 (mean age, 8.1).
Methods: Hyperactive children will be measured on tests that reflect neurologic, psychologic, and behavioral development. Children with elevated lead levels will be treated with lead chelating agents and retested at the end of a treatment regimen.
Duration: July 1973-July 1976.
Cooperating group(s): Children's Bureau, Office of Child Development, U. S. Department of Health, Education, and Welfare.

33-JH-2 AN EDUCATIONAL-RECREATIONAL SUMMER PROGRAM FOR EMOTIONALLY HANDICAPPED CHILDREN

Investigator(s): Alfred Gelerinter, Ph.D., Assistant Director; and Wilfred Newman, Ed.M., Psychologist-Evaluator, Mental Health Services, Rochester City School District, 13 Fitzhugh Street South, Rochester, New York 14614.
Purpose: To provide academic and mental health services to maladjusted children who have been maintained in regular classrooms during the school year, and to help these children hold on to previously acquired gains while on summer vacation.
Subjects: 100 students: ages 8 to 12, grades 3 to 6, from center city public and parochial schools in New York. All the subjects were judged by their school psychologist or social worker as emotionally handicapped.
Methods: All phases of the program are geared towards affective individualized educational methods and techniques vis-a-vis cognitive goals. The objectives of the summer program are (1) maintenance of performance in reading and arithmetic grade level, (2) growth in social and emotional behavior, (3) parental understanding and increased parental coping techniques with the children's problems. The program evaluation strategy consists of pre- and posttests of reading and arithmetic, and pre- and post-evaluation of students' attitudes and self-concepts and parental attitudes. Reading and arithmetic are evaluated by the Stanford Reading Achievement Test, Metropolitan Arithmetic Test, and Wide Range Achievement Test. Students' attitudes and self-concepts are assessed by a locally developed scale as well as by staff ratings of behavior. Parental attitudes are also evaluated by a locally developed measure, the Parent Attitude Scale.
Duration: July 1972-June 1975.
Cooperating group(s): Elementary and Secondary Education Act, Title III.

33-JI-1 PERSONALITY PROFILE SHIFTS AS A FUNCTION OF TREATMENT MODALITY

Investigator(s): I. Louis Young, Ph.D., Director, Adolescent Treatment Program, Taylor Manor Hospital, Ellicott City, Maryland 21043.
Purpose: To assess the effectiveness of psychotherapy, chemotherapy, electrical therapy, and milieu behavior modification on a psychiatric population of adolescents.
Subjects: An undetermined number of inpatients at a psychiatric hospital, ages 15 to 19, who

are psychotic, neurotic, or have personality disorders.
Methods: At both admission and discharge subjects will take the Minnesota Multiphasic Personality Inventory (MMPI), and psychiatric diagnoses will be made. Shifts on subjects' MMPI profile between admission and discharge will be assessed through computer analysis. The experimental design includes controls for sex, age, length of treatment, and admission diagnosis.
Findings: Only qualitative analyses on 20 subjects have been performed to date. Results are inconclusive because of the inadequate number of subjects and the necessity to control for so many variables.
Duration: November 1973-November 1975.

33-JI-2 BEHAVIOR MODIFICATION APPLIED TO REMEDIATE LEARNING DISABILITIES OF SEVERELY DISTURBED BOYS

Investigator(s): Peter Cormack, Ph.D., Director, Residential Treatment; Patricia M. Howie, Ed.D., Director of Education; and Mariellen Mikatavage, B.S., Intern, Convalescent Hospital for Children, 2075 Scottsville Road, Rochester, New York 14623.
Purpose: To increase the probability of attaining effective involvement with a remediation program for learning disabled children.
Subjects: Two severely emotionally disturbed boys, ages 9.6 and 10.0, who are learning disabled and receive residential treatment.
Methods: Individual diagnoses were made utilizing the Illinois Test of Psycholinguistic Abilities and the Marianne Frostig Developmental Test of Visual Perception. Then the target area, or the area most needing remediation, was selected and a remediation program was determined. For the first subject, the Developmental Learning Materials Auditory Memory Tapes were used; for the second subject, the Frostig Visual Perception Program was utilized. The experiment was conducted in two stages: first, the subjects received continuous chip reinforcement for correct responses; and in the second phase, they received intermittent chip reinforcement for correct responses. Chips that are earned are traded for small prizes.
Findings: During a 3-month period and after 14 half hour sessions, the first subject attained age appropriate scales on the Wepman Auditory Discrimination Test. After 11 half hour sessions, the second subject attained a 4-month general gain on the Marianne Frostig Developmental Test of Visual Perception, as well as +7 months on the Perceptual Constancy Scale and +3.2 years on the Illinois Test of Psycholinguistic Abilities Visual Memory Subscale.
Duration: January 1974-April 1974.
Cooperating group(s): Nazareth College, Rochester, New York.

33-JI-3 FOLLOW-UP STUDY OF CHILDREN DISCHARGED FROM A RESIDENTIAL TREATMENT CENTER

Investigator(s): Morris Weitman, Ph.D., Professor, Department of Psychology, Portland State University, Portland, Oregon 97207; and Buell E. Goocher, Ph.D., Director, Edgefield Lodge, Inc., Troutdale, Oregon 970 0.
Purpose: To ascertain, insofar as possible, the level of adjustment and prognosis of children discharged from a residential treatment center for emotionally or behaviorally disturbed children.
Subjects: 77 boys and 12 girls, ages 7 to 17, discharged for 1 year or more from a residential treatment center for behaviorally or emotionally disturbed children. The sample constituted all children treated and discharged from Edgefield Lodge during its first 5 years of operation.
Methods: The data of this field study were obtained from school records, juvenile authorities,

and face-to-face interviews with children, parents, and teachers. Also included were case evaluations made by clinicians outside the treatment center at the termination of the children's treatment. No control group was used. Data generated permitted the use of analysis of variance, partial correlation, and chi-squares.
Duration: December 1971-June 1974.

Juvenile Delinquency

33-KE-1 A CROSS-CULTURAL STUDY OF BEHAVIORAL DIMENSIONS IN JUVENILE DELINQUENCY

Investigator(s): Herbert C. Quay, Ph.D., Chairman, Division of Educational Psychology, Temple University, Ritter Hall, Room 451, Philadelphia, Pennsylvania 19122; and John Paraskevopoulos, Ph.D., Professor, Department of Child Development, Ioannina University, Ioannina, Greece.
Purpose: To compare the factor structure of dimensions of deviant behavior obtained from an analysis of adjudicated delinquents in Greece with results obtained in American samples.
Subjects: Approximately 150 institutionalized male delinquents.
Methods: Data will be obtained using instruments previously designed (a behavioral rating, a true-false questionnaire, and a checklist for the analysis of life history data) on the basis of extensive factor analyses of delinquents in the United States. Factor analysis will be used to elicit the dimensions with factor matching techniques subsequently used to compare the results with those obtained in the United States.
Duration: September 1973-September 1974.
Cooperating group(s): National Ministry of Social Research of Greece.

33-KE-2 THE PURPOSE AND MEANING OF DELINQUENCY

Investigator(s): Martin Familetti, M.A., Director, Special Schools and Special Services, Riverside County Public Schools, Administrative Office Building, 46-209 Oasis, Room 404, Indio, California 92201.
Purpose: To test the hypothesis that there will be no significant difference between the institutionalized juvenile delinquent mean score and the mean score of the current national norms for the Purpose-in-Life Test; and to develop a data base of norms for an institution.
Subjects: 100 males (10 Blacks, 30 Mexican Americans, 60 White Americans), ages 16 to 18, adjudicated as juvenile delinquents and sentenced by a California Superior Court judge.
Methods: A control group from Los Angeles County will be used. Subjects will be pre- and posttested over a 7-month period. The Purpose-in-Life Test results will be studied by individual item analysis and compared to results obtained by James G. Crumbaugh (Veterans Administration Hospital, Gulfport, Mississippi).
Findings: Comparing the mean score results for both the sample and the national norms, a higher positive purpose and meaning in life is indicated for the sample as evidenced by a total mean score result of 116 as compared to 102 for the cases reported by Crumbaugh.
Duration: July 1973-June 1975.
Cooperating group(s): Riverside County Probation Department, California; San Bernardino Probation Department, California.

33-KE-3 PSYCHIATRIC STUDIES OF JUVENILE DELINQUENTS

Investigator(s): Daniel Offer, M.D., Associate Director, Psychiatric Institute, Michael Reese Hospital, 2959 South Ellis, Chicago, Illinois 60616.
Purpose: To study the behavior and psychodynamics of delinquent adolescents and their families; and to compare the data collected from delinquent adolescents to data from a study of normal adolescents (Offer, 1973).
Subjects: 120 male and female juvenile delinquents, ages 13 to 17. One-third of the subjects are minority group members, and one-half come from the suburbs of Chicago.
Methods: The subjects were studied on a treatment and research ward of the Illinois State Psychiatric Institute for a minimum of 3 months. Behavioral observations of the subjects were correlated with background variables, psychological testing results, family interaction information, teacher and therapist ratings of the subjects, and the self-images of the subjects.
Findings: Violent male juvenile delinquents have a healthier self-image than nonviolent males and are more liked by their teachers and the staff. The opposite is true of the female juvenile delinquents.
Duration: September 1970-September 1975.
Cooperating group(s): Illinois Law Enforcement Agency.

33-KH-1 DRUGS AND AMERICAN YOUTH II: A LONGITUDINAL RESURVEY

Investigator(s): Lloyd D. Johnston, Ph.D., Study Director, Institute for Social Research, University of Michigan, Room 3063, P. O. Box 1248, Ann Arbor, Michigan 48104.
Purpose: To conduct a longitudinal examination of the levels and evolving patterns of drug use (both legal and illegal) after high school; to assess the effects of residing in one type of environment vs. another (e.g., working vs. college vs. military); and to assess some of the long-term consequences of drug use for the users.
Subjects: 2,200 males who were in the tenth grade in public high schools throughout the United States during 1966 through 1970.
Methods: This project extends the Youth in Transition Project, which followed a national sample of young men through high school and 1 year beyond from 1966 through 1970. The study began in fall, 1966 with personal interviews, group administered tests, and questionnaires. Additional data collections consisting of interviews and questionnaires were conducted in 1968, 1969, and 1970. Over 73 percent of the sample continued participation through 1970. This portion of the study involves a mail follow-up, conducted in spring, 1974.
Findings: Drug use was found to be less widespread than commonly assumed among this particular cohort of male high school students. Evidence indicated that drug use varied widely as a function of particular social environments. Results also disconfirmed the notions that drug use leads to a decrement in academic performance or to an increase in juvenile delinquency.
Duration: April 1974-March 1976.
Cooperating group(s): The White House Special Action Office for Drug Abuse Prevention; Office of Education, U. S. Department of Health, Education, and Welfare; U. S. Department of Labor; Office of the Secretary of Defense; Grant Foundation; National Institute of Education, U. S. Department of Health, Education, and Welfare.
Publications: Johnston, Lloyd. *Drugs and American youth.* Ann Arbor: Institute for Social Research, 1973. Other findings from the study are presented in a series of five monographs with the general title, *Youth in transition.* The monographs and several special reports were published by the Institute for Social Research.

33-KJ-1 JUVENILE OFFENDERS AND THE ADMINISTRATION OF JUVENILE JUSTICE

Investigator(s): D. R. May, B.A., Research Fellow, M.R.C. Medical Sociology Unit, Center for Social Studies, University of Aberdeen, Westburn Road, Aberdeen AB9, 2ZE Scotland.
Purpose: To provide a descriptive study of a sample of juveniles referred to court in Aberdeen, Scotland in 1959-1967; and to examine the processes underlying the administration of juvenile justice, using for illustrative purposes the case of juvenile shoplifters.
Subjects: 878 boys and girls born between 1951 and 1954, selected from a total population of 11,000 children referred to Aberdeen courts from 1959 to 1967.
Methods: Sociodemographic data collected specifically for research purposes were used. Variables examined included social class, age, socioeconomic status, sex, and school behavior (including teachers' predictions), illegitimacy, family structure, offense patterns, and patterns of court referral.
Duration: 1969-1974.
Cooperating group(s): Scottish Home and Health Department; Aberdeen City Police.
Publications: Illegitimacy and juvenile court involvement. *International Journal of Criminology and Penology,* 1973, 1(3), 227-252.

33-KK-1 BEHAVIORAL PROGRAMS IN LEARNING ACTIVITIES FOR YOUTH

Investigator(s): Harold L. Cohen, B.A., Director, Institute for Behavioral Research, 2429 Linden Lane, Silver Spring, Maryland 20910.
Purpose: To test the effectiveness of behaviorally managed leisure time activities for adolescents in minimizing juvenile problem behaviors.
Subjects: Students from four junior high schools.
Methods: The effectiveness of the project was evaluated primarily by the observation of changes in baseline data collected from juvenile justice system agencies. Subjective data were sampled by the project ethnographer to determine the effects of the program upon the attitudes of parents and the general population towards teen-age problem behaviors.
Findings: If given a free choice, students tend to prefer unstructured to structured programs. Students also show a strong preference for "drop-in" types of activities.
Duration: January 1971-December 1973.
Cooperating group(s): Center for the Studies of Crime and Delinquency; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

33-KK-2 EVALUATION OF A FAMILY RECEPTION CENTER

Investigator(s): Ann W. Shyne, Ph.D., Study Director; Edmund A. Sherman, D.S.W., Former Study Director; and Renee Neuman, B.A., Research Assistant, Child Welfare League of America, 67 Irving Place, New York, New York 10003.
Purpose: To evaluate the feasibility and effectiveness of a multiservice neighborhood program to divert children from the juvenile justice system.
Subjects: Parents and children served by the Family Reception Center program during its first 2 years of operation.
Methods: This study describes the clients of the Family Reception Center, the services rendered to them, and service outcomes. The assessment plan includes a statistical description of the program's users and services, a survey of the views of community organizations about the

program, and a survey of the backgrounds and attitudes of the Family Reception Center's staff members. Follow-up interviews with selected users are also conducted.
Findings: The planned programs were implemented quickly, the target number of clients was reached, and client contact was usually sustained.
Duration: October 1972-October 1974.
Cooperating group(s): Criminal Justice Coordinating Council; Sisters of the Good Shepherd Residences, New York.
Publications: An 84-page mimeographed report is available for $2.50 from the Child Welfare League of America: Sherman, E. A. and Neuman, R. *The Family Reception Center: Evaluation of the program.* New York: Child Welfare League of America, 1973 (Final report will be available in late 1974.); Research spotlight on a neighborhood program. *Child Welfare,* December 1973, 52, 667-681.

Corrections

33-KR-1 NATIONAL ANALYSIS OF INSTITUTIONAL LENGTH OF STAY: THE MYTH OF THE INDETERMINATE SENTENCE

Investigator(s): Gerald R. Wheeler, Ph.D., Chief, Division of Research, Planning, and Development, Ohio Youth Commission, 2234 South Hamilton Road, Columbus, Ohio 43227.
Purpose: To examine organizational and offender related factors possibly connected with delinquents' length of stay in state juvenile correctional institutions.
Subjects: 30 state juvenile correctional agencies responsible for the rehabilitation of delinquent juveniles.
Methods: This study employed a survey research design. Thirty of 50 state juvenile correctional agencies responded to a mailed questionnaire. Statistical analysis consisted of three-way analysis of variance and percentage measures. Factors considered included institution population, diagnostic classification system, and parole board status.
Findings: Controlling for institution population, diagnostic classification system, and parole board status, no significant statistical difference on institutional stay was observed. Where a pattern emerged, it suggests that except for facilities using the I-Level and Quay classification systems, parole boards release youths slightly sooner than staff approved release. Of the 30 states analyzed, only five (16 percent) reported length of stay by offense. Among these, juvenile status offenders were detained nearly as long or longer than FBI felony index offenders. The investigator concluded that post adjudication, the indeterminate sentence, is a myth; i.e., youths are subjected to a "fixed" sentence unrelated to the offense or their individual needs. This condition results in serious negative social consequences, such as the disproportionate application of correctional resources to youths who pose no danger to the community. Conversely, the rehabilitation needs of violent prone youth may be ignored. The investigator's social policy recommendations are (1) the adoption of a modified fixed sentence, and (2) abolishment of a bipartisan juvenile justice commission in each state.
Duration: January 1974-January 1975.
Cooperating group(s): Law Enforcement Assistance Act Grants.
Publications: This study is available as a monograph, Research Series No. Two, from Division of Research, Planning, and Development, Ohio Youth Commission.

33-KS-1 FEMALE DELINQUENCY: A FOLLOW-UP STUDY

Investigator(s): George B. Haarman, M.A., Director; Thomas A. Hildenbrand, B.A., Research Analyst; and Alice W. Jacobus, M.S., Research Analyst, Office of Research and Planning, Metropolitan Social Services Department, 216 South 5th Street, Louisville, Kentucky 40202.
Purpose: To determine the effectiveness of community based treatment and institutional treatment on female delinquents; and to identify socioeconomic and psychological variables that affect treatment results for a delinquent female population.
Subjects: Approximately 500 girls, ages 11 to 17, who were placed on probation or committed to a delinquent institution by the Jefferson County Juvenile Court, Kentucky.
Methods: Each subject will be followed for a period of 2 years after her release from probation or from a delinquent institution, in order to determine if she is involved in further delinquent activity. Juvenile court records of the Jefferson County Juvenile Court and the Metropolitan Social Services Department are the primary sources of data. The records contain a variety of socioeconomic and psychological data. Subjects released from probation will be compared with subjects released from institutions and with a control group of female delinquents selected at random. Results will be compared with a prior study of male delinquents placed on probation or committed to institutions. Data analysis will include a variety of statistical tests including chi-square, the Pearson product moment correlation coefficient, and multiple regression.
Duration: March 1973-January 1975.
Publications: Copies of the study are available from: Office of Research and Planning, Metropolitan Social Services Department.

33-KS-2 CHANGES IN SELF-CONCEPT AMONG DELINQUENT BOYS IN A THERAPEUTIC COMMUNITY

Investigator(s): Louis S. Barber, Ph.D., Assistant Superintendent, Riverside County Public Schools, P. O. Box 868, Riverside, California 92502.
Purpose: To evaluate the effectiveness of a therapeutic rehabilitation program for adjudicated boys.
Subjects: 54 adjudicated male delinquents, ages 15 to 18. The subjects were 66.7 percent White, 25.9 percent Mexican American, and 7.4 percent Black.
Methods: The subjects were administered the Tennessee Self-Concept Scale before and after treatment. The treatment was based on an eclectic approach, using social reinforcement in a controlled environment. The dependent variables were the 16 major subscales of the self-concept scale and were used as an index to measure change in a positive direction over a 6-month period.
Findings: There were significant differences on all of the subscale variables (at the .01 level), except on the positive behavior change variable, which was significant at the .05 level.
Duration: 1971-completed.

Family Relations

33-LA-1 MOTHER-TODDLER INTERACTION AND TODDLERS' BEHAVIOR PATTERNS

Investigator(s): Norejane J. Hendrickson, Ph.D., Professor; and Sally L. Hansen, M.Sc., Department of Home and Family Life, School of Home Economics, Sandels Building, Florida State University, Tallahassee, Florida 32306.
Purpose: To investigate children's competency and social interaction with their mothers in their home environments using a time sampling observation method.
Subjects: 37 boys and girls, ages 12 to 18 months.
Methods: Each toddler was observed for three 15-minute time periods at home with his mother. The reliability of observers was established through the use of videotape and the Alpern-Ball Developmental Profile. The observation schedule consisted of 13 defined categories, such as toddler initiated behavior, mother initiated behavior, toddler's gross motor behavior, and toddler's manual behavior. Six-second intervals were used in the observations. The data will be analyzed from matrices, and individual behavior patterns will be described.
Duration: September 1972-September 1974.

33-LA-2 SIBLING BEHAVIOR INVENTORY

Investigator(s): May R. Aaronson, Program Specialist, Early Child Care Research Program, Center for Studies of Child and Family Mental Health, National Institute of Mental Health, 5600 Fishers Lane, Rockville, Maryland 20852; and Earl S. Schaefer, Ph.D., Department of Maternal and Child Health, School of Public Health, University of North Carolina, Chapel Hill, North Carolina 27514.
Purpose: To develop a valid method for multivariate measurement of sibling relationships; and to contribute to the development of a psychology of relationships that investigates the child's behavior in dyads and family groups.
Subjects: 185 boys and girls in elementary school.
Methods: The Sibling Behavior Inventory is based on the method used by Schaefer to develop his Child's Report of Parental Behavior Inventory, in which the child describes his perception of his younger or older sister's or brother's relationship with him. The subject responds to 115 items composed of descriptive phrases or statements. These responses are scored on 23 five-item scales. The inventory, administered to 185 children, was factor analyzed. An analysis of variance by sex of the subject, by sex of the sibling, and by role of the subject (older or younger sibling) was also completed for this sample.
Findings: The factor analysis revealed three major dimensions defined by the following representative scales: I. Detachment, Hostile Detachment; II. Active Helpfulness, Teaching; and III. Possessiveness, Dependency. Pilot data demonstrate that the Sibling Behavior Inventory might also be used as a Peer Behavior Inventory both in the school and in the neighborhood.
Duration: 1971-continuing.
Publications: Results of the use of the Sibling Behavior Inventory with handicapped, retarded, and normal children are being published by Dr. Carl G. Lauterbach, South Beach Psychiatric Center, 777 Seaview Avenue, Staten Island, New York 10305.

33-LC-1 THE EFFECT OF BIRTH ORDER ON MOTHER-CHILD RELATIONSHIP

Investigator(s): Michael Lewis, Ph.D., Professor and Director, Infant Laboratory, Institute for Research in Human Development, Educational Testing Service, Princeton, New Jersey 08540.
Purpose: To examine the effects of birth order, sex of infant, and socioeconomic level of parents on the quality and nature of the mother-infant relationship; and to account for the effects of the variables on later intellectual and emotional development.
Subjects: 240 cross-sectional subjects (seen at ages 3 months, 1 year, and 2 years) divided into groups according to sex, socioeconomic level, and birth order. Group A consists of first born children from the middle class (15 boys and 15 girls) and from the lower class (15 boys and 15 girls). Group B consists of second born children; Group C, third born children; and Group D, fourth born and later born children. Each of the groups consists of a similar distribution of sex and social class attributes to Group A.
Methods: Three-month-old subjects and their mothers will be seen in their homes with trained observers recording 2 hours of mother-infant interaction. Within a week of the home visit, a response decrement attention task, the Bayley Scales of Infant Development, and the Corman-Escalona Scales of Object Permanence will be administered to the infant in the laboratory. When the infants are 1 year old, they will be observed with their mothers in a free play situation for 20 minutes in the laboratory. Bayley Scales, Corman-Escalona Scales, and the attention task will be administered again. When the infants are 2 years old, the same free play situation will be observed, and the three cognitive tasks indicated above and the Peabody Picture Vocabulary Test will be administered. At this time, the Wechsler Adult Intelligence Scale Vocabulary Test and the Witkin Rod and Frame Test and the Witkin Embedded Figures Test will be administered to the mother.
Duration: January 1974-December 1976.
Cooperating group(s): National Institute for Child Health and Human Development, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; Children's Bureau, Office of Child Development, U. S. Department of Health, Education, and Welfare.

Childrearing

33-MA-1 MOTIVATIONS FOR PARENTHOOD

Investigator(s): Elizabeth P. Kirchner, Ph.D., Research Associate, Institute for Research on Human Resources, The Pennsylvania State University, Kern Building, University Park, Pennsylvania 16802.
Purpose: To determine the factor structure of motivations for parenthood; and to assess the relationships between the factors of motivations for parenthood and demographic variables, biographical variables, and other variables such as desired family size and attitudes towards adoption.
Subjects: 1,000 male and female college students.
Methods: The project was divided into two phases: item generation and item rating. In the first phase, statements of positive motivation for parenthood were solicited from 300 college students. These statements were combined with those from the literature and reduced to a set of 127 unidimensional relatively nonoverlapping reasons for wanting children. In the second phase, 700 college students rated statements on Likert-type scales of personal salience. These

ratings were factor analyzed, and the factors were correlated with other variables.
Duration: September 1972-completed.
Cooperating group(s): National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

33-MA-2 CHILDREARING BY YOUNG WHITE MOTHERS

Investigator(s): Ann W. Shyne, Ph.D., Research Director; and Lucille J. Grow, Ph.D., Child Welfare League of America, 67 Irving Place, New York, New York 10003.
Purpose: To study the relationship between the mother's family status, age, socioeconomic status, and her attitudes towards pregnancy and the subsequent well being of the mother and her firstborn child.
Subjects: Approximately 200 white unmarried primaparas, under age 25, who plan to keep their babies; a comparison group of married primaparas; and a small group of unmarried mothers who plan to surrender their babies. All subjects will be identified at the time of delivery.
Methods: To obtain baseline data, interviews will be conducted in the home of each subject shortly after delivery. Follow-up interviews will be conducted 1½ and 3 years later with all of the subjects except those who plan to surrender their babies. The purpose of this follow-up interview is to inquire into the circumstances, social functioning, childrearing attitudes and service needs of the mother, and the child's development and well-being. Analysis will focus on initial comparison of the three groups, changes over time, as well as the relationship of the dependent to the independent variables for the mothers who keep their babies.
Duration: July 1973-December 1977.
Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare; Wisconsin Department of Health and Social Services; hospitals and child welfare agencies in Milwaukee County, Wisconsin.

33-MB-1 EDUCATION AND CHILDREARING IN CHINA

Investigator(s): Urie Bronfenbrenner, Ph.D., College of Human Ecology, Cornell University, Ithaca, New York 14850; and David A. Goslin, Ph.D., Sociologist, Russell Sage Foundation, 230 Park Avenue, New York, New York 10017.
Purpose: To complete a descriptive, comparative survey of current practices regarding childrearing and socialization in mainland China.
Methods: Observation by a team of specialists.
Duration: January 1973-December 1974.

33-MB-2 NEONATAL AND INFANT NEED FOR TACTILE AND AUDITIVE STIMULATION AS A MEANS OF DEVELOPING COMMUNICATIVE ADAPTATION IN THE 3-YEAR-OLD CHILD

Investigator(s): Karin Stensland Junker, Ph.D. and Doctor of Medical Science; and John Lind, M.D., Professor, Department of Pediatrics, Barnkliniken, Karolinska Sjukhuset, S-104 01, Stockholm 60, Sweden.
Purpose: To continue to study selective attention in infants who are not hearing impaired but

are unresponsive; to determine if these children are understimulated and/or deprived because their parents talk with them too little; and to determine if teaching parents how to stimulate the baby furthers the infant's communicative adjustment.

Subjects: A random sample of 24 normal male and female babies from a maternity hospital (experimental group); and 100 infants registered in a well-baby clinic, ages 7 to 9 months (control group).

Methods: The experimental subjects will be studied from birth through age 3. The validity of the BOEL Screening Method regarding its capacity to measure communicative adjustment was ascertained by studying the covariance between the Griffith's Developmental Scale and the screening method. The BOEL Screening Method will be used to determine the infants' communicative prerequisites. Parents will be given instructions regarding speech communication with the child, hand- and foot-stimulance, and body contact (involving the use of a Japanese baby carrier). The infant's ability to recognize the mother's voice and the stimulating value of the mother's voice will also be examined.

Findings: Based on the BOEL screening of communicative disorders, 1.5 percent of the infants in a normal population of 8.303 infants is suggested as being understimulated.

Duration: August 1973-August 1975.

Cooperating group(s): Lekoteket pa Blockhusudden (Counseling Bureau for Training through Play Activity).

Publications: Stensland Junker, K. Selective attention in infants and consecutive communicative behavior. *Acta Paediatrica Scandinavica,* January 1973, Supplement No. 231, 1972.

33-MB-3 CHILDREARING PRACTICES OF URBAN POOR MOTHERS OF PRESCHOOL -AGED CHILDREN IN FIVE CULTURES

Investigator(s): Alice S. Honig, M.A., Program Director, Family Development Research Program, College for Human Development, Syracuse University, 100 Walnut Place, Syracuse, New York 13210.

Purpose: To discover common and unique features in the childrearing practices of low income, low education mothers in five cultures responding to child behaviors when their children are 1, 2, 3, and 4 years old.

Subjects: 300 mothers of children (ages 1 to 4; equal numbers of boys and girls) from low income households in urban areas in five countries: Busan, Korea; Bombay, India; Stockholm, Sweden; Paris and Bagnolet, France; and Syracuse, New York, United States. The average number of children per family for all five cultural groups was three. The modal paternal occupation of unskilled or semiskilled labor was fairly similar across all cultures; maternal occupation was housewife. Education levels varied sharply across cultures reflecting the restrictions or opportunities for education in different cultures for poor families. In no case were the mean number of years of education greater than 11. Mothers ranged in age from 26 to 33.

Methods: The investigator proposed to gain insight into cultural differences in childrearing practices exploring the following questions: (1) Do mothers in selected urban lower class samples respond in similar ways to the same categories of child behaviors (e.g., behavior in danger situations, dependency, autonomous behaviors, positive socioemotional behaviors, etc.)? (2) If maternal responses are different, how do the mothers differ in terms of the kinds and amounts of techniques used? and (3) Within cultures, how do the maternal responses vary as a function of the child's age and sex? The Parental Implicit Learning Theory Inventory (IPLET, Caldwell and Honig, 1965) was administered as a structured interview procedure to the 300 mothers. Each interview contains 45 statements in addition to four general childrearing questions. There are four different versions of IPLET with statements suitable for mothers of children ages 1, 2, 3, and 4 and 5, although some of the items are identical or similar. The coding system permits

analysis of maternal teaching strategies and maternal attitudes towards specific behaviors.

Findings: Analysis at present has been devoted to the data for only 151 mothers of 1- and 3-year-old boys and girls in the five cultural areas. The individual interviews with mothers in each group revealed some cultural commonalities. Mothers responded overwhelmingly positively to positive child actions. Some behaviors— dangerous actions particularly—in general elicited negative responses. Some maternal response patterns seemed typical of the particular culture. For example, Korean mothers, although often punitive with 3-year olds, reported more indulgence with babies. French mothers did markedly more scheduling to train their children. American mothers used more physical punishment and also provided more verbal explanations to teach a child.

Duration: 1965-1975.

Cooperating group(s): Colleagues native to and fluent in the native languages of the five cultures studied, as well as research associates in the Family Development Program, Syracuse University.

Publications: Caldwell, B. and Honig, A. S. *IPLET.* Unpublished manuscript, Syracuse University, 1965. A 3-page abstract of findings to date is available from the investigator.

33-NA-1 SOCIAL ECOLOGY OF SOUTH COMMONS

Investigator(s): Jean E. Bedger, M.A., Research Director; and Deborah Pellow, M.A., Research Associate, Council for Community Services, 64 East Jackson Boulevard, Chicago, Illinois 60604.

Purpose: To study the effects of a racially and socioeconomically mixed community on the development of attitudes, behavior, and social intercourse in children; and to test the hypothesis that as a child grows up, his perceptions are to a large degree a product of his local environment, which goes beyond the reaches of home and school to "second-order effects"; e.g., the outside, but impinging, community.

Subjects: Preschoolers and their parents, boys and girls, both Black and White, of upper and lower socioeconomic strata. One sample to be drawn from South Commons, a planned innercity community on the Near South Side of Chicago incorporating both racial balance (60 percent White, 40 percent Black) and socioeconomic mix (60 percent upper income, 40 percent moderate). This sample will be stratified for race, class, and location. Another sample will be drawn from the neighborhood at large.

Methods: The data fall into the perceptual and behavioral realms of investigation. Observation and interviewing are the main methods of data collection. Interviewing includes network analysis, attitudinal testing, and projective testing for manifest content. Still photography and videotaping will be used to supplement the observational data and to analyze the interplay of social and physical environments.

Findings: The sociophysical separation of moderate and upper income housing within South Commons operates like that between South Commons and the outside community. Children stay with the members of their own class; the poor are predominantly Black. Although the school is the one institution which could bring together rich and poor, Black and White, cross-line interaction of children has failed. The area had been open space which was used by outside children; they were dispossessed. In addition, these poor, outside children have been exposed to fears and hostilities of their parents, vis-a-vis the newcomers. They return to the space out of habit, antagonism, and curiosity. South Commons children generalize from bad experiences with their behavior and become intolerant.

Duration: July 1973-June 1976.

Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare.

33-NA-2 MOTHERS' REPORTS OF CHILDREN'S BEHAVIOR IN MIDDLE CHILDHOOD: RELATIONSHIPS TO SEX, ETHNICITY, AND MOTHER'S EDUCATION

Investigator(s): Read D. Tuddenham, Ph.D., Professor, Department of Psychology; Jane B. Brooks, Ph.D., Research Psychologist, Institute of Human Development; and Lucille Milkovich, M.S., Supervising Statistician, University of California at Berkeley, Berkeley, California 94720.

Purpose: To study the prevalence of certain behaviors of children in middle childhood as reported by their mothers.

Subjects: 3,000 boys and 3,000 girls, ages 9, 10, and 11, who were part of a study initiated in an urban hospital setting. The majority of the subjects was white, but the sample included about 1,200 Blacks, 100 Orientals, and 100 Chicanos. The children's mothers had participated in the study since pregnancy.

Methods: A card deck of 100 items was constructed for the mothers to describe their child's behavior. The mother sorted the brief statements into three categories: "mostly true, " "uncertain," and "mostly not true." Few items in the deck received a large percentage of responses in the uncertain category. Subsamples of the subjects were compared using chi-squares with Yates's correction. For example, boys were compared with girls; and boys, whose mothers had a college education, were compared with boys whose mothers graduated from high school.
Findings: Surprisingly, the prevalence of many behaviors reported by mothers in this study is highly similar to the prevalence of many behaviors reported by mothers in interviews and in other instruments, time periods, and countries.
Duration: 1971-completed.
Cooperating group(s): Kaiser Hospital; National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

33-NA-3 CLOTHING SHOPPING, PURCHASE, AND USE PRACTICES OF RURAL ADOLESCENTS

Investigator(s): Eleanor A. Kelley, Ph.D., Professor, School of Home Economics, Louisiana State University, Baton Rouge, Louisiana 70803.
Purpose: To investigate the practices and problems which adolescents have in shopping for and in using their clothing.
Subjects: 196 males and females from two lower socioeconomic status rural communities: 92 Black and White eighth graders attending three schools in Southern Louisiana, and 104 students from three schools in Northern Louisiana.
Methods: A check sheet questionnaire was formulated which includes indigenous work usages and examples relevant to the subjects' community settings. The questionnaire was administered to the subjects as a group interview by reading and repeating each response by number. Familial social class ranks were computed according to Hollingshead's Two Factor Index of Social Position. Item analyses of clothing data will be cross-tabulated with the independent variables of ethnicity, sex, and residence.
Duration: June 1973-June 1975.
Cooperating group(s): Louisiana Agricultural Experiment Station.

33-NB-1 THE TRANSITION FROM HIGH SCHOOL TO WORK: THE ATTITUDES AND EARLY OCCUPATIONAL EXPERIENCES OF YOUNG MEN

Investigator(s): Jerome Johnston, Ph.D., Study Director; and Jerald Bachman, Ph.D., Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, Michigan 48104.
Purpose: To describe (1) the job attitudes and job experiences of young men in high school, (2) job attainment 1 year after high school, and (3) job satisfaction of the employed 1 year after high school; and to determine correlates of unemployment, and for the employed, to determine the correlates of the status of their job.
Subjects: A national cross-section of 10th graders who were enrolled in public high schools throughout the United States in 1966. Over 73 percent of the sample continued participation in the Youth in Transition Project through 1970.
Methods: This project supplemented the Youth in Transition Project. Baseline data were collected in fall 1966. Methods of data collection included personal interviews plus group administered tests and questionnaires, all conducted in the schools. Follow-up data collections in-

volved interviews and questionnaires, administered on neutral sites, in 1968, 1969 (just before graduation for most respondents), and 1970. Analysis of variance was used most frequently for bivariate relationships. Multiple classification analysis (nonlinear regression) was used to analyze the relationship of multiple predictors to a dependent variable.

Findings: The most important determinants of unemployment among young men recently out of high school are family background and intelligence. For full-time workers in entry jobs, the status of the job was determined by background, intelligence, and local job market. Also for full-time workers, wages were a function of the local economy and not of personal characteristics. Full-time workers showed high levels of job satisfaction.

Duration: November 1971-November 1973.

Cooperating group(s): U. S. Department of Labor; Office of Education, U. S. Department of Health, Education, and Welfare; National Institute of Education, U. S. Department of Health, Education, and Welfare; U. S. Department of Defense; W. T. Grant Foundation.

Publications: A special report, *The transition from high school to work: The work attitudes and early occupational experiences of young men,* is available from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. Earlier findings of the Youth in Transition Project are presented in five monographs and several special reports, available from the Institute for Social Research, which will also publish a research monograph in 1975 after additional data are available.

33-NB-2 THE SOCIOLOGY OF BILINGUAL EDUCATION

Investigator(s): Joshua A. Fishman, Ph.D., Professor of Psychology and Sociology, Graduate School of Education, Yeshiva University, 500 West 58th Street, New York, New York 10033.

Purpose: To suggest and examine societal dimensions of international validity in determining the success of bilingual education, particularly at the secondary level.

Subjects: Students attending 100 secondary level bilingual education programs throughout the world.

Methods: The investigation includes a review of the literature and visits to schools by the investigator. Also, questionnaire self-reports were collected from school principals and program directors.

Duration: November 1972-November 1974.

Cooperating group(s): Research Section, Division of Foreign Studies, Office of Education, U. S. Department of Health, Education, and Welfare.

33-NE-1 TRAINING TEACHERS IN POPULATION DYNAMICS: THE URBAN LIFE — POPULATION EDUCATION INSTITUTES IN BALTIMORE

Investigator(s): Lawrence W. Green, Dr. P.H., Associate Professor; and Andrew A. Fisher, M.A., School of Hygiene and Public Health, Johns Hopkins University, 615 North Wolfe Street, Baltimore, Maryland 21205.

Purpose: To introduce Baltimore city school teachers to basic demographic concepts and statistical techniques; to provide teachers with a knowledge base for meaningful discussions of population; and to relate population issues to problems of urban living.

Subjects: 263 city school teachers 33% males and 67% females; 52% Black, 42% White, and 6% other races; ages 21 to 29 (43%), 30 to 39 (28%), 40 to 49 (19%), and 50 and over (10%); teachers of grades K to 9 (34%), 7 to 9 (38%), 10 to 12 (24%), and adult education (4%).

Methods: This study employed an experimental, longitudinal design with random assignment

of teachers to one of nine institute workshops. A pretest questionnaire was given to teachers in Institutes 4 through 9, and two posttests were given to all teachers after the institute program. A self-administered questionnaire was the method of data collection. The statistical treatment consisted of the ranking of means, nonparametric tests of statistical significance, and computation of the effectiveness index of knowledge and attitude change.

Findings: Interest in population education is widespread and not limited to high school social studies teachers but includes elementary teachers as well. The institute program produced effective changes in knowledge and in teaching practices. Curriculum materials suitable for grades K through 12 were designed and are presently being used in the school system.

Duration: September 1972-June 1974.

Cooperating group(s): Rockefeller Foundation; Baltimore Public Schools, Maryland; Planned Parenthood Association of Maryland.

Publications: A paper presented at the First Annual Meeting of the World Population Society, Washington, D. C., February 1974: Green, L. W. Training teachers in population dynamics: A preliminary evaluation of the Urban Life-Population Education Institutes of Baltimore. Copies of the paper may be obtained from the investigator.

33-NG-1 PROGRAM OF INSERVICE EDUCATION

Investigator(s): Richard M. Piper, Ph.D., Consultant; and Vahac Mardirosian, M.A., Director, Hispanic Urban Center, Los Angeles, California 90033.

Purpose: To alter teachers' perceptions of and behavior towards Mexican American children in order to effectively facilitate achievement in the children.

Subjects: 475 faculty members of Los Angeles elementary schools, ages 20 to 60+; 84% females, 16% males; 92% Anglo, 18% other races.

Methods: Teachers were selected from schools within Title I and Model Cities areas of the Los Angeles City Unified School District that enroll a majority of students with Spanish surnames. The experimental design is based on a static group comparison with a control group of 83 teachers. The control group was selected from schools matched with experimental group schools on proportion of students with Spanish surnames, school size, geographical location, and participation in the Title I program. The faculty members were given a course of study involving lectures, discussion, field trips, audiovisual presentations, and readings. An original test, the Chicano Awareness Scale, was used. Analysis involves t-tests for unequal numbers of subjects and unequal variances.

Findings: The experimental group was significantly more likely than the comparison group to share the Chicano perspective with respect to the Chicano experience of America. Particular reference is made to the Chicano experience with political parties, police courts, labor unions, businesses, schools, and minority/majority relations. Data on the effects of the course of study on teacher behavior are forthcoming.

Duration: September 1972-continuing.

Cooperating group(s): Model Cities, Los Angeles; Los Angeles City Unified School District, Title I Office.

33-NG-2 PREGNANCY WASTAGE AND AGE OF MOTHER AMONG THE AMISH

Investigator(s): Laurence J. Resseguie, Ph.D., Associate Professor, Department of Biology, Beloit College, Beloit, Wisconsin 53511.

Purpose: To test the hypothesis that significant changes in the risk of pregnancy failures are not caused by increasing age of the mother (within the age range of 19 through 34 years).

Subjects: 7,500 pregnant Old Order Amish women of Illinois, Iowa, Missouri, and Wisconsin.
Methods: The outcomes of the subjects' pregnancies are studied by comparing the age specific rates of pregnancy wastage in this population to those of the general United States population. It is assumed that if the age associated increase in loss rates in the general population is not caused by aging, but by the propensity of low risk women to cease childbearing at lower ages than high risk women, there should be little or no age associated increase in losses among the Amish.
Findings: Increases in fetal wastage rates among the Amish are not observed until after the age of 35.
Duration: September 1972-February 1974.
Cooperating group(s): Departments of Pediatrics and Human Genetics, University of Wisconsin, Madison; National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

33-NG-3 PLAY AND DRAMA AMONG SANEMA CHILDREN

Investigator(s): Gregory P. Stone, Ph.D., Professor, Department of Sociology, University of Minnesota, 1135 Social Science Tower, Minneapolis, Minnesota 55455; Gladys I. Stone, Ph.D., Associate Professor, Department of Sociology, University of Wisconsin at River Falls, River Falls, Wisconsin 54022; and Maria Villalon, M.A., Graduate Assistant, Department of Anthropology, University of California at Berkeley, Berkeley, California 94720.
Purpose: To perform a cross-cultural test of some of George H. Mead's explanations of early socialization.
Subjects: All of the children in a Sanema Indian Village in remote south central Venezuela.
Methods: The research design consists of disciplined observation for 1 hour 3 times a day, at the same time and same space each day. The period of observation is 15 days.
Findings: There was an absence of team games in the play of the children in this Sanema village. The investigators question whether some of the children's rituals can be construed as team games.
Duration: July 1969-continuing.
Publications: Villalon, Maria. Proxemic analysis of interaction in a Sanema village. Master's of Arts Thesis. Department of Sociology, University of Minnesota, 1971.

33-NG-4 BLACK STYLIZATIONS AND IMPLICATIONS FOR CHILD WELFARE

Investigator(s): Jualynne Dodson, Assistant Professor, School of Social Work, Atlanta University, 23 Chestnut Street, Atlanta, Georgia 30314.
Purpose: To investigate the parameters of culturally expressive behavior of Black children, and to discern the implications of the investigation for child welfare.
Subjects: First year sample: 90 boys and girls, age 15, from three socioeconomic classifications. Second year sample: 90 boys and girls, age 9.
Methods: A varied methodological approach was used in order to verify the validity of the children's preferences for expressive behavioral characteristics. The research instruments designed and utilized in the study included taped interviews with the subjects, a parent survey, and picture sorts to assess the culturally expressive behavior.

Findings: Preliminarily, the children's expressive behavior appears continuous with their African heritage. Initial data appear to support an hypothesis which assumes continuity in the culture of Black people across social class lines.
Duration: June 1972-May 1975.
Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare; Atlanta Public School System, Georgia.

33-NG-5 PRESCHOOL CHILD MORTALITY AND LOCAL BELIEFS ABOUT CHILD MORBIDITY AND MORTALITY IN RURAL NORTH INDIA

Investigator(s): A. Kielmann, M.D., Research Associate; N. Kielmann, M.S., Research Assistant; and P. Grover, Ph.D., Assistant Professor, Department of International Health, School of Hygiene and Public Health, Johns Hopkins University, 615 North Wolfe Street, Baltimore, Maryland 21206; and S. Bhatia, M.B.B.S., Physician; and I.S. Uberoi, M.D., Medical Director, Rural Health Research Center, Narangwal, Ludhiana, Punjab, India.
Purpose: To determine the seasonal incidence and cause of death in a population of preschool children, and to relate the mortality pattern to the socioeconomic background, birth status, nutritional status, age, and birth order of the child, and the parity of the mother; and to determine local beliefs about causes of child mortality, disease specific treatment of morbidity, and prevention of child deaths.
Subjects: 2,200 children (per year over a 4-year period), ages birth to 3, comprising the preschool child community in 22 villages of Punjab, India.
Methods: All child deaths (including still births) occurring in 22 villages over a 4-year period were analyzed using demographic, sociocultural, economic, and ecological variables. In a subsample of 14 villages, every child death was analyzed through examination of available records, discussion with the child's family, and discussion with the health worker (if one was assigned to the village).
Findings: Preliminary results seem to indicate that the factors of birth weights below 2.5 kilograms, low caste status, nutritional status below 70 percent of the Harvard Weight for Age Standards, and female sex status are associated with high mortality throughout the birth to 3 years age span. The level of knowledge about prevention of childhood diseases, causes of death, and the relative vulnerability of different age groups varied directly with the socioeconomic level of the parent as well as with the level of health care facilities available in a given village.
Duration: January 1969-December 1974.

EDUCATIONAL FACTORS AND SERVICES

General Education

33-OA-1 DESIGNING AN EVALUATION OF SOCIAL COMPETENCE IN HEAD START CHILDREN

Investigator(s): Senta A. Raizen, M.A., Senior Researcher, The Rand Corporation, 2100 M Street, N.W., Washington, D.C. 20037.
Purpose: To develop an evaluation design that will yield information on (1) the overall impact of Head Start on participating children, (2) the long-range effects of Head Start, and (3) ways of improving child development programs.
Subjects: A representative sample of Head Start children and control groups. (Some measures will be administered in grades 1 to 3.)
Methods: This study includes the examination of past experience and the current knowledge base with respect to evaluation of preschool programs and consultation with child development experts, psychometricians, and related professionals. The work is essentially policy-analytical and conceptual, including design of experimental models and consideration of alternative sampling, assessment, and analysis strategies.
Duration: July 1973-June 1974.
Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare.

33-OA-2 THE EFFECTS OF CLASSROOM SIZE ON SELECTED BEHAVIORS OF CHILDREN AND A TEACHER

Investigator(s): Claudia A. Johnson, M.A., Director, Early Childhood Education Center, 1601 University Village East, Salt Lake City, Utah 84108.
Purpose: To examine the effects of varying classroom size on child behaviors and teacher behaviors.
Subjects: Three boys and two girls, average age 3.9; and one preschool teacher.
Methods: A 2 X 4 X 4 X 5 factorial design (activity X trials X size X subjects) was used and analyzed by separate univariate analyses of variance. Classroom size varied (5, 10, 15, and 20 children), but only the five target children were observed. Observational data on the children included appropriate peer interaction, aggression, task behavior, and teacher orientation. Teacher behaviors (negative, positive, classroom management, instruction, and presentation) and teacher satisfaction were rated daily.
Findings: Larger groups produce increases in child peer interaction behaviors (especially in free play) and decreases in teacher oriented behaviors. The teacher employed more management techniques and positive behaviors with larger groups. There were no significant effects on child aggression, on task behaviors, or on teacher negative behaviors.
Duration: December 1973-May 1974.
Cooperating group(s): Department of Psychology, University of Utah, Salt Lake City.

33-OA-3 TRAINING PARAPROFESSIONALS TO DO WORK ON THE UNIVERSITY CAMPUS

Investigator(s): Allan M. Leventhal, Ph.D., Director; Barry McCarthy, Ph.D., Associate Director of Training; Alan Berman, Ph.D., Associate Director of Research; and Craig Wasserman, M.Ed., Associate Director of Peer Counselors, Counseling Center, American University, Washington, D.C. 20016.

Purpose: To evaluate the effects a large multipurpose paraprofessional program will have on an entire university community; to train and to evaluate the training of peer counselors in a number of crucial areas of out-reach service on a university campus; to establish services operated by peer counselors to which student recipients respond favorably; and to prepare manuals for use by other universities which describe the core and specialty area training programs.

Subjects: 230 university students.

Methods: The program is referred to as the P.E.A.C.E. Program—Peer: Environmental Analysts, Counselors, and Educators. The students are trained as peer counselors to work in one of six programs. Each service is directed by a student coordinator with a professional consultant, a counselor from the university Counseling Center. The Hotline Program is an information, crisis, and referral source open daily from 12 Noon to 4 A.M. In another program, Academic Aides, students from almost every department are trained to aid students in selecting curriculum. The Companion Program works closely with the Counseling Center. Peer counselors (companions) are trained to help students with skill building; e.g., study skills, social skills, and assertive skills. The Residence Hall Program trains graduate residents and resident assistants in skills to improve their effectiveness. Learning to Learn is a program which involves an academic course designed to help students adjust to academic life. The sixth program, PreWithdrawal and Human Ecology, helps students considering leaving American University come to a rational decision about their departure, researches the irritants that exist at the university, and proposes alternative solutions. The methods and design of the programs involve survey methods; program evaluation; outcome effectiveness research methods; pre-post design by semester, by year, by program, and by helper; and unique large-scale interventions on the university campus population.

Duration: July 1973-July 1976.

Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare; Youth Development and Delinquency Prevention Administration, Social and Rehabilitation Service, U.S. Department of Health, Education, and Welfare.

Publications: A manual, *The American University Companion Program: A model of paraprofessional counseling* (MS No. 427), is available from Journal Supplement Abstract Service, American Psychological Association, 1200 Seventeenth Street, N.W., Washington, D.C. 20036. Other manuals are in preparation.

33-OA-4 PROGRAM FACTORS AND STUDENT OUTCOMES IN SUCCESS SCHOOLS

Investigator(s): Franklin W. Neff, Ed.D., Director, Evaluation Studies; and Winton M. Ahlstrom, M.A., Research Associate, Institute for Community Studies, 2 West 40th Street, Kansas City, Missouri 64111.

Purpose: To compare student outcomes in a Schools without Failure Program with outcomes for students not enrolled in such a program; and to measure program variables and assess their relationships with student outcomes.

Subjects: Students in approximately 12 fourth grade and 12 fifth grade classes participating in the Schools without Failure Program, and students from a similar set of classes

not participating in the program.
Methods: The study involved both inner city and non-inner city metropolitan schools. Outcome data will be obtained regarding cognitive, affective, and social outcomes for the students. Data on program variables will be obtained from classroom observation (reciprocal categories and modified categories systems). In addition, staff from participating schools will be asked to respond to questionnaires. Organizational variables, such as goals, roles, sanctions, and problem solving will also be obtained.
Duration: June 1974-May 1977.
Cooperating group(s): Kansas City, Missouri School District; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare.

33-OA-5 CLASSROOM ACOUSTICS AND EFFECTS OF NOISE UPON PERFORMANCE

Investigator(s): Robert L. McCroskey, Ph.D., Professor; and John S. Devens, M.A., Research Assistant, Department of Logopedics, Wichita State University, 2210 Jardine Drive, Wichita, Kansas 67219.
Purpose: To determine ambient noise levels and reverberation times in classrooms built between 1890 and 1960, and to measure student activity level and attention under conditions of normal and elevated noise levels in the classrooms.
Subjects: 75 boys and girls, ages 6 to 12, equal numbers in grades 1, 3, and 5.
Methods: Acoustics will be studied in 100 classrooms selected from schools constructed at 10-year intervals between 1890 and 1960. Ambient noise levels and reverberation times in these classrooms will be collected using a sound level meter, tape recorded, and analyzed by graphic level recorder and oscillographic display. Student activity levels under normal and elevated ambient noise levels will be analyzed by specially constructed vibration sensors attached to desks. Educational performance will be measured by scores on paper and pencil tasks under normal and elevated ambient noise level conditions.
Findings: Reverberation times in newer buildings appear to be shorter than in the older buildings and may be excessive in both.
Duration: January 1974-December 1974.
Cooperating group(s): Wichita Public School System.

33-OB-1 WHO DO YOU GO TO FOR HELP?

Investigator(s): Eleanore Fisher, M.A., Director, Pupil Personnel Services, Briarcliff Manor Public Schools, Briarcliff Manor, New York 10510.
Purpose: To determine the affective needs of young adolescents; and to examine the school structure to ascertain whether it provides the needed personnel, space, and amount of help, as perceived by students.
Subjects: 330 boys and girls, ages 10 to 14.
Methods: A counselor met with students during regularly assigned English classes. The counselor asked each student to anonymously answer the question, "Who do you go to for help?" The results were tabulated in 26 categories.
Findings: Children, ages 10 to 14, overwhelmingly seek advice and help in problem solving and decision making from their peers first, from parents second, and then from school personnel.
Duration: January 1974-completed.

33-OF-1 THE IEA PROJECT: INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT

Investigator(s): Torsten Husen, Tutor, Institute for the Study of International Problems in Education, University of Stockholm, Fack, S-104 05, Stockholm 50, Sweden.
Purpose: To study and explain differences in results on internationally applicable instruments of educational achievement attained by different national school systems and by different schools and students within those systems; to complete detailed analyses of the relationship between international variations regarding school structure, curricula, and teaching methods and educational achievement in different national systems; to study fundamental problems which cannot be studied successfully within the framework of a particular cultural pattern or a particular nation; and to make it possible for each participating country to evaluate its school system's functioning by international norms.
Subjects: Students from 22 participating countries including representative samples from four student categories, approximately 100 participating schools per category: (1) age 10, (2) age 14, grades 7 and 8, (3) students from the final grade of compulsory school, and (4) students from the grade immediately preceding university level.
Methods: The project activities can be divided into three stages: Mathematics Achievement (completed 1967); Science, Reading Comprehension and Literature (data collected in 1970); and English, French, and Civics (data collected in 1971). The instruments used were devised and pretested on a joint basis by student and testing experts in the participating countries. Students' instruments consisted of cognitive tests, attitude tests, and questionnaires concerning background data. Teachers and head teachers also completed special questionnaires. Within the framework of the Swedish IEA Project, several substudies are being conducted including the following subjects: Swedish schools in an international context; recruitment for postsecondary education; statistical method in behavioral scientific research; the validity of Piaget's logical model of development of thought; and recruitment for preuniversity education. (See *Research Relating to Children, Bulletin 32,* Study 32-OF-3, pp. 113-114 for report from England on the IEA Project.)
Duration: 1967-continuing.
Publications: Purves, A. C. *Literature education in ten countries. International studies in Evaluation II.* Stockholm: Almqvist and Wiksell (no date given); Husen, T. (Ed.) *International study of achievement in mathematics. A comparison of twelve countries.* Vols. I and II. Stockholm: Almqvist and Wiksell, 1967 and New York: John Wiley and Sons, 1967; Wolf, R. M. *International Project for the Evaluation of Educational Achievement, Phase I: International study of achievement in mathematics: A comparison of twelve countries.* Data bank manual. Uppsala: Almqvist and Wiksell, 1967; Comber, L. C. and Keeves, J. P. *Science education in nineteen countries. International studies in Evaluation I.* Stockholm: Almqvist and Wiksell, 1973; Thorndike, R. L. *Reading comprehension education in fifteen countries. International studies in Evaluation III.* Stockholm: Almqvist and Wiksell, 1973.

33-OG-1 ASSESSING THE BEHAVIOR OF PRESCHOOLERS

Investigator(s): J. Ronald Lally, Ed.D., Project Director; and Alice S. Honig, M.A., Program Director, Family Development Research Program, College for Human Development, Syracuse University, 100 Walnut Place, Syracuse, New York 13210.
Purpose: To monitor the behaviors of teachers of 3- to 5-year olds by developing a checklist instrument (similar to instruments used effectively with teachers of infants and toddlers), which will be sensitive to variations in teacher efficacy and to the effects of teacher training.
Subjects: Teachers of preschool children.

Methods: Checklist instruments were developed to monitor the behaviors of teachers of infants (ABC-I) and toddlers (ABC-II). Teacher behaviors appropriate to the increased developmental age of the children have been added to ABC-II to create the present instrument (ABC-III). This instrument is being used in two centers with varying amounts of inservice training in their teacher programs. An observer stationed in a classroom area tallies every behavior occurring during each 2-minute rating period and notes it on the ABC-III Checklist. Observation periods are systematically varied across time of day, day of week, and type of setting within the open education program.
Findings: Preliminary analysis of a small sample suggests that in a center in which inservice teacher training is not carried out, the frequency of language facilitative or concept-teaching behaviors of teachers is lower than in another center in which inservice is a high priority program component.
Duration: 1973-1975.
Publications: References relating to ABC Scales I and II, created for and utilized with teachers of infants and toddlers include a paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana, February 1973: Honig, Alice S. and Lally, J. Ronald. Assessing teacher behaviors with infants in day care; and a paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois, April 1974: Honig, Alice S. and Lally, J. Ronald. Behavior profiles of master teachers of infants and toddlers.

33-OH-1 THE WESTMANLAND SURVEY

Investigator(s): Yngve Carlsten, Project Leader; and Bengt-Olov Ljung, Professor, Pedagogiska Institutionen, Lararhogskolan, Fack, S-100 26, Stockholm 34, Sweden.
Purpose: To describe the educational routes and vocational goals for students with different home backgrounds, study motivation, and study aptitudes; to gauge the extent to which different student groups achieve the educational goals they set for themselves; and to evaluate the fulfillment of goals defined by different types of schools.
Subjects: Data were collected and followed up on approximately 3,700 boys and girls in grade 9 of comprehensive school in Westmanland County, Sweden, during the spring term of 1966.
Methods: The Westmanland Survey refers to a project incorporating several detailed studies. Data were collected on one group of students followed from their comprehensive schooling through other educational institutions up to age 20. Background information was collected on students from as early as grade 6 including parents' education, occupations, localities of residence; the pupils' and families' educational aspirations; and the students' interests and early vocational plans. Data were also gathered on schooling (study decisions; marks; results of knowledge, ability, and standardized achievement tests). Pupils were graded in terms of marks and test results, and it was observed what proportions of students from various social classes were qualified for university and college selection under various intake standards. In addition, in 1966, 1968, and 1970, students completed questionnaires on study and vocational plans and attitudes towards previous schooling and employment.
Findings: Detailed results concern (1) study decisions and achievements and descriptions of the student routes through the upper level of comprehensive school, continuation school, and upper secondary school of students with different social backgrounds and different study motivations and aptitudes; (2) the characteristics of students denied opportunity to apply for upper secondary school; (3) the socioeconomic structure of school classes; (4) students' tests and marks; (5) discontinuation of studies and pupil absenteeism; (6) characteristics of students leaving school immediately after comprehensive school; (7) compar-

ison of immigrant children and Swedish children; and (8) conditions and attitudes of students with low study performances.
Duration: 1966-1974.
Cooperating group(s): The Department of Educational Research, Stockholm School of Education, Sweden.
Publications: There are 13 reports concerning this research available from the Pedagogiska Institutionen. The reports have not been translated into English.

33-OI-1 DROPOUTS AND GRADUATES 5 YEARS AFTER HIGH SCHOOL: A RESURVEY OF A NATIONAL SAMPLE OF YOUNG MEN

Investigator(s): Jerald G. Bachman, Ph.D., Program Director, Survey Research Center, Institute for Social Research, University of Michigan, P. O. Box 1248, Ann Arbor, Michigan 48104.
Purpose: To explore the long-range effects of dropping out of high school, particularly in terms of occupational outcomes; to contrast a broad range of post-high school educational environments and their impacts; to examine the effects of various occupational experiences; and to study changes in selected values, attitudes, and behaviors.
Subjects: Over 2,200 males in the tenth grade in 87 public high schools throughout the United States in 1966.
Methods: This project extends the Youth in Transition project for which baseline data were collected in fall, 1966. Personal interviews, group administered tests, and questionnaires were conducted in the schools. Follow-up data collections involved interviews and questionnaires administered on neutral sites in 1968, 1969, and 1970. Over 73 percent of the sample continued participation through 1970. The present study involves a mailed questionnaire follow-up of the panel conducted in the spring of 1974.
Findings: The first four data collections suggest that dropping out of high school is more a symptom than a problem in its own right. The lower aspirations and higher rates of delinquency shown by dropouts were already present at the beginning of the tenth grade, before the students dropped out.
Duration: September 1973-August 1976.
Cooperating group(s): The National Institute of Education, U.S. Department of Health, Education, and Welfare.
Publications: A series of five monographs, *Youth in transition,* and several special reports present the earlier findings and was published by the Institute for Social Research.

33-OI-2 STUDY OF CHILDREN AND YOUTH, AGES 5 TO 19, IN FOSTER, BOARDING, AND GROUP HOMES, WHO ARE NOT ATTENDING SCHOOL

Investigator(s): Ruth Chisholm, M.S.W., Research Coordinator, Vancouver Resource Board, Families and Children's Division, 1675 West Tenth Avenue, Vancouver 9, British Columbia, Canada.
Purpose: To define the extent of the problem of children who are not attending school, to describe the children's characteristics, and to obtain information for the development of suitable agency services to meet the children's needs.
Subjects: 177 children not attending school and 753 children in school, ages 5 to 19, who live in foster, boarding, or group homes. One hundred of the 177 nonattenders were subjects for further inquiry.

Methods: A descriptive study was conducted of children in Children's Aid Society (Canada) care. Subjects not attending school were compared with attenders of the same age, status, and type of residence. Tests for significance between the two groups were applied. A questionnaire completed by caseworkers was used in an exploratory descriptive study of 100 nonattenders.

Findings: Characteristics found to be statistically significant in the comparison of attenders and nonattenders were age, sex, legal status, length of time in care, branch office providing service, and age at time of admission. The exploratory study found the median age at school leaving to be 1 year less than the median age reported by the city school board. Time out of school ranged from 1 month to 4 years. A majority of nonattenders had poor performance records, poor attendance records, and grade failure. The most frequently mentioned reason for not attending school was lack of interest/motivation, and the most frequently mentioned problem regarding future planning was the low esteem of the nonattender. This study suggests the need for vocational and employment programs that will increase skill and self-esteem, as well as supportive services within the family setting at an earlier age. Increased family involvement at school and agency levels is recommended.

Duration: October 1972-completed.

Publications: A monograph is available from the investigator.

33-OJ-1 ANALYSIS OF THE YEAR-ROUND SCHOOL PROGRAM

Investigator(s): G. Paul Killian, Ed.D., Director, Research and Development Department, Washoe County School District, 425 East Ninth Street, Reno, Nevada 89502.

Purpose: To determine parents' opinions of changing their children's schooling pattern from a traditional 9-month schedule to a year-round schedule.

Subjects: 485 families with 816 elementary school students on a year-round schedule. The families reside in a low middle class school attendance area and in a district with 34 elementary schools and 31,000 students.

Methods: All of the parents of students on the year-round schedule were surveyed by an anonymous questionnaire mailed directly to each family. The questionnaire was developed and based on the most frequently raised complaints and positive educational factors attributed to year-round schools. Questionnaire responses were categorically summated by frequency, and comments were categorically summated and classed.

Findings: Parents' reactions to the year-round schedule were positive in terms of perceived increases in student achievement, attitudes, and learning retention. Reports indicated that family life was not affected; many families reported that the home situation was improved. Negative reactions related to the lack of air conditioning and the fact that not all schools are on the year-round schedule.

Duration: May 1973-July 1974.

Publications: Single copies of a Washoe County School District research report are available from the investigator.

Specific Skills

33-PA-1 THE USE OF MODELING TECHNIQUES TO INFLUENCE THE ACQUISITION OF COMPUTATIONAL ARITHMETIC SKILLS IN LEARNING DISABLED CHILDREN

Investigator(s): Thomas C. Lovitt, Ed.D., Professor; and Debbie Smith, M.A., Experimental Education Unit, University of Washington, Seattle, Washington 98105.
Purpose: To use modeling techniques to influence the acquisition of computational arithmetic skills in learning disabled children.
Subjects: Seven boys with learning disabilities, ages 8 to 12.
Methods: The study comprised three experiments. After a baseline period, which indicated that the seven students were unable to compute certain arithmetic problems, a modeling intervention was scheduled (Experiment 1). In Experiment 2 the modeling intervention was used again, following a feedback intervention which was not effective. Components of the modeling procedure were analyzed in Experiment 3. For some students, only a demonstration was provided; for other students, the modeled problem was provided as a referent.
Findings: In Experiments 1 and 2 the modeling procedure was always effective. In fact, the results were immediate (as suggested by the literature). Experiment 3 revealed that for some students certain components of the modeling procedure are effective.
Duration: October 1972-May 1973.
Cooperating group(s): National Institute of Education, U.S. Department of Health, Education, and Welfare.

33-PA-2 TEACHING PROCESS ANALYSES: MATHEMATICS AND PSYCHOLINGUISTICS

Investigator(s): Wiggo Kilborn, Project Leader, Institute of Education, University of Gothenburg, Molndalsvagen 36, S-412 63, Goteborg, Sweden.
Purpose: To develop strategic instruments on which the teacher can base educational decisions, including long-term and short-term teaching strategy; to develop flow charts illustrating the interconnection of different items of the comprehensive school arithmetic course, so that the teacher is able to choose his general strategy on the basis of what items are contingent upon learning other items; and to classify and analyze teaching in relation to low performers in school.
Subjects: Ninth grade students in a comprehensive school in Sweden.
Methods: A flow chart describing school arithmetic as a hierarchic system was developed to provide a basis for the construction of the strategic instrument. This chart was then broken down into a matrix of smaller subcharts from which a battery of diagnostic tests was constructed. Preliminary diagnoses will be administered in a large number of classes in 1974. On the basis of these results initial revisions will be made, primarily concerned with filling gaps in the material and reviewing the design of the diagnoses for different stages. During 1974-1975 successive revisions will be made of the material, and the battery will be field tested in 1975-1976.
Duration: 1973-1976.
Publications: Kilborn, W. *The SISU material in mathematics as a hierarchic system.* Goteborg: Department of Educational Research, Gothenburg School of Education, 1972. (Stencil; not translated); Lundgren, U. P. *Frame factors and the teaching process. A contribution to curriculum theory and theory on teaching.* Stockholm: Almqvist and Wiksell, 1972 and a paper read at the American Educational Research Association meet-

ing in New Orleans, 1973: Lundgren, U. P. Pedagogical frames and the teaching process. A report from an empirical curriculum project.

33-PA-3 MINIMAL EFFECTS OF THREE TYPES OF FEEDBACK ON ARITHMETIC PERFORMANCE

Investigator(s): Thomas C. Lovitt, Ed.D., Research Coordinator; and Colleen Blankenship, M.A., Assistant Teacher, Curriculum Research Classroom, Experimental Education Unit, WJ-10, University of Washington, Seattle, Washington 98195.
Purpose: To determine the effects of three types of feedback (often used in school situations) on the accuracy of computing arithmetic problems.
Subjects: Seven learning disabled boys, ages 8 to 11.
Methods: Data were obtained on the subjects' daily correct and error rates. The students were assigned 25 arithmetic problems a day. The experiment consisted of four phases in which different kinds of feedback for accuracy were provided. During Phase I no feedback was offered. In the next phase feedback for correct answers was provided. Feedback for correct and incorrect answers was scheduled during Phase III. Feedback for correct and incorrect answers was still offered in Phase IV, and the pupils were also shown how to answer the problems they solved incorrectly in this phase.
Findings: Although these three types of feedback are often used in school situations, only one type of feedback (feedback for correct and incorrect answers combined with showing the student how to answer incorrectly solved problems) was effective with only one of the pupils.
Duration: October 1973-February 1974.
Cooperating group(s): National Institute of Education, U.S.Department of Health, Education, and Welfare.

33-PB-1 READING AND WRITING: PRESCHOOL 70. A SURVEY OF THE EFFECT OF INDIVIDUALIZED READING AND WRITING IN NURSERY SCHOOL

Investigator(s): Eve Malmquist, Professor, Teachers College, Department of Educational Research, Storgatan 28, S-582 23, Linkoping, Sweden.
Purpose: To study the effect of individualized reading and writing tuition for 6-year olds at nursery school as compared with ordinary preschool activities not including reading and writing instruction.
Subjects: Approximately 320 6-year olds attending five nursery schools in the Linkoping School Area during 1971-1972.
Methods: Subjects were divided into 16 groups (20 subjects each) made as equivalent as possible on the basis of test results (school maturity tests, reading readiness tests, and visual perception tests). During the preschool year, an experimental group received reading and writing practice for two 30-minute lessons per school day. This practice, led by a qualified primary school teacher, was adapted in pace and level as far as possible to individual aptitudes and followed the teaching process recommended in Malmquist/Mosskin's reading tutor series, *I Can Read.* In the control groups, there was no reading and writing practice; instead, all the time was devoted to ordinary preschool activities. One control group (consisting of pupils who were in grade 1 during the school year 1971-1972) received reading and writing practice as indicated by their 1969 school curriculum. Instruments employed (developed by Malmquist) were tests to investigate the children's knowledge and skills on starting school, including a school maturity test, reading readiness

tests, a rating scheme (12 personality variables according to a 5-grade scale) and a copying test. In addition, visual perception tests (Engwall-Malmquist) and a spelling test (Malmquist and Ekener) were used, and questionnaires were given to parents concerning children's school adjustment and reading habits at home.
Findings: Results were similar to those of a pilot study in which the experimental pupils were able to recognize and correctly reproduce all letters of the alphabet and read simple continuous texts like those included in grade 1. Ninety-three percent of the parents responding to a questionnaire expressed positive or highly positive attitudes to the reading and writing instruction given in nursery school while 3 percent expressed negative attitudes.
Duration: 1971-1973.

33-PB-2 TRANSFORMATIONAL SENTENCE COMBINING IN A BARRIO SCHOOL

Investigator(s): James W. Ney, Ed.D., Professor, Department of English, Arizona State University, Tempe, Arizona 85281.
Purpose: To determine whether exercises in transformational sentence combining increase Barrio school children's proficiency in written English.
Subjects: 36 children with Spanish surnames, ages 9 to 11.
Methods: The research design called for an experimental school class which received the experimental treatment for 5 months, 30 minutes a day, 5 days a week. The control group received the same treatment but only for 2 weeks. Pre- and posttests were given which consisted of free written compositions triggered by a stimulus event. Sentences were analyzed for maturity using T-units. All data were subjected to analysis of covariance.
Findings: Students increase their fluency in writing, and the complexity of their sentence structures also increases.
Duration: February 1973-August 1974.

33-PB-3 PRESCHOOL PREPOSITION TEST

Investigator(s): May R. Aaronson, B.A., Program Specialist, Early Child Care Research Program, Center for Studies of Child and Family Mental Health, National Institute of Mental Health, 5600 Fishers Lane, Rockville, Maryland 20852; Earl S. Schaefer, Ph.D., Department of Maternal and Child Health, School of Public Health; and Donald J. Stedman, Psychologist, Frank Porter Graham Child Development Center, Highway #54 By-Pass West, University of North Carolina, Chapel Hill, North Carolina 27514.
Purpose: To develop a test of preschool children's knowledge of prepositions which will identify children in need of an intensified language development program; and to establish the test's reliability, validity, and the subpopulations for which it is suitable.
Subjects: Preschool children, ages 2 to 5.
Methods: The development of the Preschool Preposition Test (PPT) was based on preliminary evidence which indicated that knowledge of prepositions correlated with verbal comprehension in young children. The test was designed for children 3 and 4 years old, or 5 years old in disadvantaged populations. It may be administered by nonprofessionals with minimal training. The PPT consists of 23 items presented in random order of difficulty. A yellow metallized board with slightly raised figures of a green automobile and a red boy and magnetized rubber balls are used in the test administration. Each test item directs the child to place one of the balls on the board in relation to the figures; the key words in each command are either a preposition or a prepositional phrase. Each child is given the PPT, the Peabody Picture Vocabulary Test (PPVT), and a special sub-

test to determine whether children perceive the red boy on the test board as Black or White. In addition, the test examiner completes a Test Behavior Checklist after each testing session.

Findings: The PPT is still in research status. It has been used on rural, suburban and urban, Black and Caucasian, lower and middle class populations. When administered (with the Stanford-Binet Intelligence Test, the Johns Hopkins Perceptual Test, and the PPVT) to 60 Black inner-city 3-year olds, the PPT scores correlated as highly with the other test scores as the tests did with each other: about .57. During the evaluations of 3-year olds, the PPT differentiated very sensitively children who were typically hostile, belligerent, negative, and irritable; and who had mothers who were hostile, relatively nonverbal with the child, and who evinced low interest in the child's education. The PPT might identify those children who could benefit from a specially provided one-to-one relationship with a warm accepting adult. Evidence of cultural or racial bias has not been found.

Duration: 1968-continuing.

Cooperating group(s): The Catholic University of America, Washington, D.C.; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare.

Publications: Aaronson, M. and Schaefer, E. Preschool Preposition Test. In O. G. Johnson and J. W. Bommarito (Eds.), *Tests and measurements in child development: A handbook*. San Francisco: Jossey-Bass, Inc., 1971. The Preschool Preposition Test is not available for general distribution, but the test equipment may be obtained on loan for research studies from the National Institute of Mental Health.

33-PD-1 EXTENDED PILOT TRIALS OF THE AESTHETIC EDUCATION PROGRAM: A QUALITATIVE DESCRIPTION, ANALYSIS, AND EVALUATION

Investigator(s): Louis M. Smith, Ph.D.; and Sally Schumacher, M.A., Graduate Institute of Education, Washington University, St. Louis, Missouri 63130.

Purpose: To study the diffusion of a new curriculum in aesthetic education.

Subjects: Boys and girls in grades K through 3, who were enrolled in nine elementary schools.

Methods: Naturalistic field observation.

Findings: Findings are concerned with diffusion issues, classroom experiences in aesthetic education, and a model of aesthetic education.

Duration: Summer 1971-September 1972.

Cooperating group(s): CEMREL, Inc., St. Ann, Missouri; Pennsylvania State Department.

Special Education

33-QB-1 PROGRAMMING INTERPERSONAL CURRICULA FOR ADOLESCENTS (PICA) RESEARCH, EXTENSION, AND PRACTICE (PREP)

Investigator(s): James Filipczak, M.S., Associate Educational Director; and Harold L. Cohen, B.A., Executive Director, Institute for Behavioral Research, 2429 Linden Lane, Silver Spring, Maryland 20910.

Purpose: To develop, conduct, assess, and extend to community use, programs of

academic and social skill development for public school adolescents who exhibit problems or deficiencies.

Subjects: 80 boys and girls, ages 12 to 15, who attend a metropolitan area public school, and who have a range of academic and social skill problems.

Methods: This study follows the 1971-72 school year study in which 60 students were matched on academic and behavioral criteria and randomly placed in experimental and control groups of 30 subjects each. The experimental students, who attended school half-day and the PICA program half-day, were paid wages based on their performance in PICA remedial math and English programs. Remedial study skills, interpersonal relations programs, and parent training were included in the PICA program. (See *Research Relating to Children, Bulletin 27,* Study 27-QB-2, pp. 95-96.) The study for the 1972-73 school year divides the subjects into five groups of 16 subjects each: one control group and four experimental groups. Twenty-six major academic and social behavior data types will be drawn throughout the year.

Findings: The 1971-72 results show significant differences in favor of the experimental group on such academic measures as reading comprehension, English language, math computation and application, and such social measures as disciplinary referrals to the office and class changes for problem solving.

Duration: June 1968-June 1975.

Cooperating group(s): National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare; Montgomery County Public Schools, Maryland.

Publications: Filipczak, J.; Breiling, J.; and Storm, R. Programming for disruptive and low-achieving students: An experimental in-school alternative. *The Journal of the International Association of Pupil Personnel Workers,* January 1973, XVII(1), 38-42.

33-QC-1 EXPERIMENTALLY INDUCED VARIATIONS IN TEACHERS' INSTRUCTIONAL INTERACTIONS WITH MILDLY RETARDED CHILDREN

Investigator(s): William W. Lynch, Ph.D., Professor; Robin Dalton, Ph.D., Research Associate; Louis Epstein, M.S., Graduate Assistant; and William Frazer, M.S., Graduate Assistant, Center for Innovation in Teaching the Handicapped, Indiana University, 2853 East Tenth Street, Bloomington, Indiana 47401.

Purpose: To examine the effects of instructing teachers of special classes to use specified interactive tactics with educable mentally retarded children in social studies, arithmetic, and oral reading.

Subjects: 280 educable mentally retarded children, ages 10 to 13.

Methods: This investigation was comprised of three experiments: social studies, arithmetic, and oral reading. Each experiment compared the experimental group, in which the teacher was instructed in specified interactive tactics, with the control group, in which the teacher used his or her normal tactics. Both experimental and control groups received the same predesigned lesson content. The interaction process and the learning outcome data were compared.

Findings: Teachers can produce significant changes in language productivity in social studies, in reflectivity in arithmetic problem solving, and in successful word attack behavior in oral reading with educable mentally retarded children through interactive tactics designed to optimize pupil abilities relevant to specific classroom tasks.

Duration: February 1973-August 1974.

Cooperating group(s): Office of Education, U.S. Department of Health, Education, and Welfare.

Publications: The final reports will be published by the Center for Innovation in Teaching the Handicapped, Indiana University.

33-QH-1 CORRELATIVE EDUCATION: LIMITED HEARING CHILDREN

Investigator(s): Gwenyth R. Vaughn, Ph.D., Chief, Audiology-Speech Pathology Service, Veterans Administration Hospital, Birmingham, Alabama (Address correspondence to: Rt. #11, Box 499-71N, Birmingham, Alabama 35210); and Ted A. Fuller, M.A., Principal, Speech and Hearing Center, Birmingham Public Schools, 2801 Clairmont Avenue, South, Birmingham, Alabama 35233.

Purpose: To improve the education of deaf and hard of hearing children through innovative, exemplary, and adaptive procedures within existing educational facilities—(1) for normally hearing and (2) day school for the deaf; and to provide comprehensive evaluations, studies of attitudes, additional education for professionals and parents, and dissemination of information concerning deafness.

Subjects: 59 boys and 40 girls, ages 2.8 to 13.6.

Methods: Data were reported on 90 subjects according to better ear averages of (1) 40-64 dB, (2) 65-84 dB, and (3) 85+ dB. Data included levels of communication skills, achievement levels, and degrees of correlative educational placement, as well as the effect of adding ORAL PLUS (Total Communication) to the program of the deaf subjects.

Duration: June 1969-May 1974.

Cooperating group(s): Bureau of Elementary and Secondary Education, Office of Education, U.S. Department of Health, Education, and Welfare; Alabama Department of Education; Birmingham Public Schools; Medical Center, University of Alabama, Birmingham.

33-QH-2 SELF-INSTRUCTIONAL REMEDIAL INSTRUCTION (SISU)

Investigator(s): Karl-Gustaf Stukat, Professor, Scientific Leader; and Ulla-Britt Bladini, Project Leader, Department of Educational Research, Gothenburg School of Education, Pedagogiska Institutionen, Lararhogskolan, Ovre Husargatan 34, 413 14, Goteborg, Sweden.

Purpose: To develop individualized materials and methodology for pupils with learning difficulties.

Subjects: Remedial students in lower level Swedish and mathematics courses.

Methods: An inventory of most needed self-instructional aids for low performers was compiled from teachers' responses to a questionnaire. Items of knowledge and skill in lower level Swedish and mathematics courses were chosen for development work, and teaching goals within each selected sphere were developed according to the curriculum. More than 100 sets of learning material were constructed, preliminarily tested on small groups of pupils, and then given a comprehensive field test lasting a year. During the field test students were observed in their work with the learning material (process analysis), and students' and teachers' reactions to the material were noted, as well as the relation between students' learning achievements and the predefined goals (product analysis).

Findings: Students with serious deficiencies in skills that are fundamental to all subsequent learning can be raised to an acceptable level by means of self-instructional remedial instruction training. Observations of the teaching and learning process showed that the material functions on a self-instructional basis for the most part, and that only a limited amount of intervention is required from the teacher for purposes of support and instruction. The attitudes of the pupils and their teachers bear witness to the positive reception given to the self-instructional remedial instruction material.

Duration: September 1967-December 1973.

Cooperating group(s): National Board of Education, Sweden; Gothenburg Education Authority.

Publications: Reports (in Swedish only) of SISU projects may be ordered from the Department of Educational Research, Gothenburg School of Education, Pedagogiska Institutionen.

33-QH-3 TRAINING EARLY CHILDHOOD EDUCATORS: DEVELOPMENT OF COMPUTER ASSISTED COURSES IN DIAGNOSTIC TEACHING

Investigator(s): G. Phillip Cartwright, Ph.D., Associate Professor, Department of Special Education; and Carol A. Cartwright, Ph.D., Associate Professor, Department of Education, The Pennsylvania State University, 329 Cedar Building, University Park, Pennsylvania 16802.

Purpose: To develop and field test two full-length college level computer assisted instruction courses to prepare preservice and inservice teachers to work effectively with children with learning problems.

Subjects: Preservice and inservice teachers.

Methods: Two courses, one for preschool teachers and one for primary level teachers, were designed to complement a previously developed and validated computer assisted instruction course, Early Identification of Handicapping Conditions in Children (See *Research Relating to Children. Bulletin 30,* Study 30-QH-2, p. 114.) Following this model, course material and learning strategies for the two courses were authored by subject matter specialists and submitted to programmers for conversion to the computer assisted instruction system. Groups of students field tested the course in its various stages of development and these formative evaluation data were used to revise the courses. Consequential evaluation studies are planned to determine if teachers are effectively using the diagnostic teaching procedures.

Findings: Summative evaluation studies on the model course, Early Identification of Handicapping Conditions in Children, indicate that students assisted by computer instruction perform significantly better than students taught the same content via traditional lecture-discussion methods.

Duration: January 1972-completed.

Cooperating group(s): Bureau of Education for Handicapped, Office of Education, U.S. Department of Health, Education, and Welfare.

Publications: Cartwright, G. P.; Cartwright, C. A.; and Ysseldyke, J. E. Two decision models: Identification and diagnostic teaching of handicapped children in the regular classroom. *Psychology in the Schools,* January 1973, X(1), 4-11.

33-QH-4 EFFECTIVENESS OF PARENTS AS A TREATMENT RESOURCE IN RURAL AREAS

Investigator(s): Alan Hofmeister, Ph.D., Associate Professor, Department of Special Education, Utah State University, Logan, Utah 84322.

Purpose: To develop and assess the intervention effects of a model using parents as the major treatment resource in remediating selected problems of pupils with learning difficulties in rural areas; and to develop a model that is consistent with the fiscal and manpower resources of rural areas.

Subjects: 300 slow or learning disabled children in rural areas, grades 1 to 12.

Methods: The first year of the project involves preparation, formative evaluation, and the revision of parent packages. In the second year, formative evaluation of screening and prescription materials and the selection and pilot testing of standardized instruments will be conducted. The summative evaluation of two rural areas will occur in the third year.

Duration: July 1973-June 1976.

Cooperating group(s): SEIMC, University of Oregon; Learning Laboratory, Idaho State University; Cooperative Service Agency, South Central Utah; School District #148, Grace, Idaho; School District #150, Soda Springs, Idaho.

33-QH-5 FUSION STRESS, EYE MOVEMENT, AND READING DISABILITY

Investigator(s): Robert M. Allen, Ph.D., Professor, Department of Psychology, University of Miami, P. O. Box 248341, Coral Gables, Florida 33124; and Nathan Friedman, D.O., Optometrist, 360 Westward Drive, Miami, Florida 33166.
Purpose: To evaluate the role of fusion training of eye movements in ameliorating reading disability.
Subjects: Junior high school students and senior high school students.
Methods: Each subject in the experimental group receives visual fixation training for 9 weeks. A new device, the Visual Trainer, is used during the training period. The control group receives no training. Subjects are pre- and posttested with a standardized test of reading comprehension, speed, and accuracy. Statistical analysis will be conducted comparing the difference between each subject's performance before and after training.
Findings: A preliminary report on 20 control and 20 experimental subjects indicated that, while both groups increased in reading test scores, the experimental group's grade increase in reading ability far outdistanced the control group's grade increase (significant at the .001 level of probability).
Duration: June 1973-continuing.
Cooperating group(s): The Vitra Corporation.
Publications: A paper presented at the Southeastern and Florida Psychological Association Convention, Hollywood, Florida, May 1974: Friedman, N. and Allen, R. M. Fusional eye-movement stress is reading emotional stress.

33-QH-6 A COMPARISON OF THE EFFECTIVENESS OF LIMITED BLOCK TIME TEACHING AND CONTINUAL PERIODIC TEACHING FOR CHILDREN WITH LEARNING DISABILITIES

Investigator(s): Lawrence H. Weiner, Ed.D., Director, Special Education and Pupil Personnel Services, Fiske House Special Education Center, 217 Lincoln Avenue, Barrington, Rhode Island 02806.
Purpose: To investigate differences in two methods of "mechanically" programming for resource help for children with learning disabilities.
Subjects: Experimental group: 25 boys and girls, grades 1 to 4, with average intelligence and specific learning disabilities. Control group: 25 children matched for IQ, chronological age, and grade placement.
Methods: Twenty-five children were tutored in the resource room throughout the school year on a need-determined schedule. This averaged out to 10 percent of the time the children were in school per week. The control subjects were seen on a quarterly basis with a rotating schedule in which they received help every alternate quarter. During the quarter the child was scheduled for help, he or she received as much time as needed per day. During the alternate quarter the child received no help. The Wide Range Achievement Test was administered to the subjects to determine if there were differences in achievement gains.
Findings: Both teaching schedules (continual help and periodic block time help) were equally effective; there were no significant differences in the achievement gains between the two groups. Gains made by both groups were significant. Both methods are effective with block time allowing more flexibility to more students.
Duration: September 1972-completed.
Publications: Copies of the study are available from the investigator for $2.00.

33-QH-7 AN INVESTIGATION OF THE EFFECT OF LINGUISTIC TRAINING ON THE OPERATORY LEVEL OF LEARNING DISABLED CHILDREN

Investigator(s): Chester E. Gorton, Ph.D., Professor, College of Education; and Selma Hughes, M.Ed., Doctoral Teaching Fellow, Department of Special Education, Texas Woman's University, Box 23029, TWU Station, Denton, Texas 76204.

Purpose: To determine if linguistic training, specifically training in relational terms, improves the performances of learning disabled children on four tasks adapted from Piagetian tests of conservation of distance and area.

Subjects: 50 learning disabled children, ages 6 to 9, in special education classes (designated as learning disabled by a multidisciplinary team prior to their placement in special classes).

Methods: The subjects were pretested on four tasks adapted from Piaget's test of conservation of distance and area. The children who were nonconservers were assigned to two groups. One group received linguistic training, the other group did not. The linguistic training, taught by language therapists and special education teachers, consisted of six lessons in the use of terms describing distance and the spatial coordinate system, and relational terms involving measurement and dimensions. The children were posttested to see if there were any significant differences in the performance of the two groups.

Duration: March 1974-August 1974.

Cooperating group(s): Research and Evaluation Center for Learning, Dallas Independent School District; Fairhill School, Dallas; Preston Hollow Presbyterian Weekday School, Dallas.

33-RA-1 IMPROVING THE ORGANIZATIONAL EFFECTIVENESS OF INSTITUTIONS FOR CHILD DEVELOPMENT THROUGH CONSULTATION

Investigator(s): Edward M. Glaser, Ph.D., President; and Harvey L. Ross, Ph.D., Vice-President, Human Interaction Research Institute. Kirkeby Center, Suite 1120, 10889 Wilshire Boulevard, Los Angeles, California 90024.

Purpose: To identify significant factors that facilitate or inhibit the effectiveness of various types of child care institutions, and to develop and demonstrate intervention strategies that are likely to help child care institutions become more effective and efficient organizations in providing child care and treatment services.

Subjects: An experimental group of four children's residential centers representing dependent, neglected, delinquent, and retarded children populations; and a contrast group of seven children's residential centers.

Methods: During a conference which provided the introduction and review of the potential project participants, four child treatment institutions were chosen as target agencies for consultation intervention, and seven agencies volunteered to participate as a contrast group. A professional consultant, who provided a total of up to 40 days direct consultation during the year, was assigned to each of the four institutions. A fifth professional person served to facilitate interconsultant communication and to assist in making a comparative analysis of the four consultation experiences. Each consultant recorded his visits in a detailed activity report. A format was developed to codify all consultation interventions and short-term outcomes, so that the consultation phase of the project could be translated into research findings. A Baseline Data Form was administered to the four experimental institutions and to 11 contrast institutions at the beginning of the consultation year. Because of shortcomings, this form was revised. The Institution Self-Study Questionnaire was administered at the conclusion of the consultation experience to the 11 institutions. An independent outside evaluator was employed to assess the outcomes or impact of the consultation. The evaluator used (1) the consultants' subjective reports, (2) responses to the two questionnaires, and (3) in-depth personal interviews with the institutions' directors and staffs to evaluate the consultation experience.

Findings: The organizational development consultation does appear to have resulted in improvements in operational and service-delivery effectiveness in three of the four institutions where it was provided. The conditions or circumstances which seem to bear upon kind and degree of improvements brought about by this method (and by these four different consultants interacting with staff in four different settings) will be dealt with in a final report.

Duration: August 1971-July 1974.

Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare.

Publications: Publications will be available through the Office of Child Development, U.S. Department of Health, Education, and Welfare. A primary goal of this project is to produce utilizable materials (publications) for a variety of audiences — including institution directors and staff, boards of directors, consultants, referring and licensing agencies, and OCD. One publication tentatively entitled *Guidelines to Organizational Development Consultation in Children's Residential Centers* will be directed to consultants. The other publication will be for the use of directors, staff, and those interested in the effectiveness of children's residential centers, tentatively entitled *The Designing of a Children's Residential Center for Individualized Services.*

33-RA-2 COMPARATIVE STUDY OF CHILD WELFARE SERVICES

Investigator(s): Walter A. Friedlander, Ph.D., Professor Emeritus, School of Social Work, University of California at Berkeley, Berkeley, California 94720.
Purpose: To find new insights into the different and changing patterns of child welfare services in various nations throughout the world.
Subjects: Child welfare service agencies in the United States, Germany, France, Switzerland, Italy, Africa, Near Eastern countries, and some developing countries.
Methods: Analysis of child welfare principles and practices will be based on the observation of services in several countries. Analysis of the international literature, with the intent to compare findings with the investigator's experiences in Europe and the United States, is also included in the project design. (See *Research Relating to Children, Bulletin 18*, Study 18-Y-18, 192-193, in which the investigator reported on child welfare problems in Africa.)
Findings: The different cultural and value systems in the continents indicate that the Western methods of child care and education cannot be applied to developing countries, particularly Africa.
Duration: 1958-1974.

33-RB-1 EDUCATION FOR PARENTHOOD

Investigator(s): Ivan B. Stafford, Ph.D., Director, Administrative Services; and Walter Friedman, Brian Archimbaude, and William K. Powers, Boy Scouts of America, North Brunswick, New Jersey 08902.
Purpose: To test the inclusion of new materials taken from the Exploring for Childhood curriculum in Boy Scouts of America programs at the local level.
Subjects: Boys from Explorer Posts and Boy Scout units, ages 11 to 18.
Methods: The study includes designing a pilot program and then expanding it to a group of councils for testing, and at the same time, developing curriculum materials for the national level.
Findings: It has been possible to develop materials at the national level. It was discovered in the pilot program that there is a deep interest on the part of young people to help and work with children.
Duration: June 1973-June 1976.
Cooperating group(s): Bergen County Council, Boy Scouts of America, River Edge, New Jersey; National Staff for Exploring, Scouting, and Cubbing, Boy Scouts of America, North Brunswick, New Jersey.
Publications: Articles have appeared in *Exploring Magazine* and *Scouting Magazine*.

33-RB-2 HEALTH EDUCATION AND SERVICE ACTIVITIES OF BOYS' CLUBS

Investigator(s): Gary Rosenberg, Ph.D., Project Director; and Carole Kazlon, Research Associate, Boys' Clubs of America, 771 First Avenue, New York, New York 10017.
Purpose: To ascertain the extent of health education and services presently offered by Boys' Clubs; and to determine services needed in order to design a multifaceted, comprehensive health program to be used by Boys' Clubs when members reach the appropriate level of ability and capacity.
Subjects: Boys, ages 6 to 18, members of more than 1,000 Boys' Clubs in the United States.

Methods: A general appraisal of critical problems affecting health services of young people will be obtained from studies by national health organizations. A research questionnaire will be issued to all Boys' Clubs across the country, in order to inventory the health services and educational activities that have been conducted during the past year. Topical areas will include health services rendered; health education activities conducted; number of members served; staffing and funding of services; club facilities devoted to health activities; community health services, agencies, or organizations directly involved; club policies, rules, and regulations relating to health matters; staff training procedures; and club evaluation procedures applied to health activities. In-depth interviews will be conducted with the staffs of 15 representative clubs to explore the health services they provide. Findings will be assessed and a comprehensive proposal will be presented to the Robert Wood Johnson Foundation.
Duration: August 1973-July 1974.
Cooperating group(s): The Robert Wood Johnson Foundation.

33-RB-3 EVALUATION OF EDUCATION FOR PARENTHOOD PROGRAMS

Investigator(s): Larry A. Morris, Ph.D., Project Director; and James C. Petersen, Ph.D., Field Coordinator, Behavior Associates, 2627 East Broadway, Tucson, Arizona 85716.
Purpose: To evaluate Education for Parenthood Programs conducted at 29 demonstration sites throughout the United States by seven voluntary youth-serving organizations.
Subjects: 8,000 males and females, ages 11 to 20.
Methods: The primary goals of the evaluation program are (1) to specify the effectiveness of the instructional programs (materials, methods, and practicum) in developing knowledge, skills, and attitudes favorable to being a competent parent; (2) to assess the quality of the instructional programs; (3) to determine the responses of the instructional staff to the program; (4) to assess the extent to which the programs use appropriate ethnic and cultural input; (5) to assess the degree of parent involvement in programs and the response of parents to the program; (6) to evaluate administrative effectiveness; and (7) to determine immediate and long-term follow-up effects. The evaluation will be conducted on three organizational levels: (1) the effectiveness of individual programs (within-programs design); (2) comparison between national program effectiveness (between-programs design); and (3) overall program effects. Rating scales, content tests, questionnaires, behavioral observation procedures, in-depth structured interviews, as well as audiovisual materials developed specifically for the Education for Parenthood Program will be used in the evaluation.
Duration: June 1973-June 1978.
Cooperating group(s): Office of Child Development, U.S. Department of Health, Education, and Welfare; Boy Scouts of America; Boys' Clubs of America; 4-H Clubs; Girls Scouts of the United States; National Federation of Settlements and Neighborhood Centers, Salvation Army; Save the Children Federation.

33-RB-4 EVALUATION OF SPRING 1974 EXHIBITS OF A MUSEUM FOR CHILDREN

Investigator(s): Bernie Jones, Ph.D., Director; and Greg Hoch, M.A., Staff Member, Social Change Systems, Inc., 847 East Colfax Avenue, Suite 209, Denver, Colorado 80218.
Purpose: To evaluate the responses of children and adults attending demonstration exhibits sponsored by a children's museum group; to obtain feedback and assist the museum group develop future exhibits in a permanent facility; and to assist architects in

the design of a children's museum.
Subjects: Approximately 2,000 boys and girls who attended museum demonstration exhibits, ages 2 to 12, from all socioeconomic backgrounds.
Methods: Children's responses were obtained by general observations of how many and what types of children were at each exhibit at a given time as well as by tracking individual children during a visit to the museum. Data collected from tracking individual children included children's stopping points, duration of stops, level of involvement, and degree of interaction with children and adults. Interviews were conducted with adults accompanying the children, diagrams were made on the use of space, and sound levels were recorded.
Duration: April 1974-July 1974.
Cooperating group(s): A Museum for Children operated by the Children's Museum of Denver, Inc.
Publications: A printed report is available from Social Change Systems, Inc.

33-RB-5 HORACE BLANTON YOUTH CENTER: AN EXPLORATORY APPRAISAL

Investigator(s): Alexander G. Zaphiris, M.S.W., Professor, Graduate School of Social Work, University of Denver, University Park, Denver, Colorado 80220.
Purpose: To assess the services of the Horace Blanton Youth Center, a newly established facility for children with learning disabilities and social and emotional adjustment problems.
Subjects: 21 boys and girls, ages 6 to 16, plus their families and counselors. The majority of the sample was Black.
Methods: Data were collected by personal interviews based on three different instruments; i.e., one each for the children, parents, and counselors. The study employed an exploratory, comparative design to examine the congruency of opinions in various areas of the children's adjustment.
Duration: September 1973-June 1974.
Cooperating group(s): Horace Blanton Youth Center, Denver, Colorado.

33-RD-1 STUDY OF AGENCY PLACEMENT OF HANDICAPPED CHILDREN

Investigator(s): Bruce L. Warren, Ph.D., Associate Professor; and Patricia R. Ferman, Ph.D., Associate Professor, Sociology Department, Eastern Michigan University, Ypsilanti, Michigan 48197.
Purpose: To examine innovative techniques and procedures facilitating the adoptive placement of handicapped children.
Subjects: 80 public and private adoption agencies in Alabama, Georgia, Indiana, Michigan, North Carolina, and Ohio.
Methods: Questionnaires were mailed to agency directors and to all adoption and foster care workers in each agency.
Findings: Handicapped children, including the multiply handicapped, are being placed for adoption. There is great variation in the attitudes of workers and their ability to make such placements. The more successful agencies are organized to find families for children rather than children for families. Families who adopt handicapped children often have had experience with the particular handicap.
Duration: July 1972-June 1974.

Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare.
Publications: *Finding families for the children: A handbook to assist the child welfare worker in the placement of children with a mental, emotional, or physical handicap,* April 1974, is available for $1.00 from: Sociology Department, Eastern Michigan University, Ypsilanti, Michigan 48197.

33-RE-1 DECISION MAKING PROCESSES IN FOSTER CARE

Investigator(s): Kermit T. Wiltse, D.S.W., Professor; and Eileen Gambrill, Ph.D., Lecturer, School of Social Welfare, University of California at Berkeley, 120 Haviland Hall, Berkeley, California 94720; and Theodore Stein, M.S.W., Project Director, Children's Home Society of California, 3200 Telegraph, Oakland, California 94609.
Purpose: To examine the behavior of child welfare workers, in order to determine which specific behaviors of social workers influence what happens to children entering and continuing in out-of-home care; and to provide effective guidelines to counteract the alleged "drift" of placed children into continued foster care.
Subjects: Public child welfare workers in two county systems; in the experimental phase, samples of foster care cases from a large urban public child welfare agency.
Methods: The initial exploratory data were obtained by survey and follow-up interviews with child welfare staff members in a program for urban families and children. In the experimental phase, matched experimental and control groups of families were drawn from different public foster care caseloads. The natural parents of children in the experimental sample participated in intensive counseling given by specially trained social workers. The types of decisions made and relative numbers of decisions will be systematically counted and compared.
Findings: For initial findings, see Publications below.
Duration: July 1973-February 1977.
Cooperating group(s): San Francisco Social Services Commission; Children's Home Society of California; Alameda County Department of Human Resources, California; San Francisco Foundation; Office of Child Development, U.S. Department of Health, Education, and Welfare.
Publications: Wiltse, Kermit T. and Gambrill, Eileen. Foster care 1973: A reappraisal. *Public Welfare,* Winter 1974, 32(1); Gambrill, Eileen and Wiltse, Kermit T. Foster care: Plans and actualities. *Public Welfare,* Spring 1974, 32(2).

33-RF-1 FAMILY DAY CARE HOME SYSTEM DEMONSTRATION PROJECT

Investigator(s): Thomas A. Fisher, M.S.W., Social Planner, Dane County Social Services, 1202 Northport Drive, Madison, Wisconsin 53704. Project monitored by: Development Association, Inc., 1521 New Hampshire Avenue, N.W., Washington, D.C. 20036.
Purpose: To determine the feasibility, implementation methods, and results of the proposed Federal day care regulations; to review the financial impact of these regulations; to develop processes that will insure that developmental child care can be provided in family day care homes; and to disseminate the findings of the demonstration project to other systems.
Subjects: Two groups of 20 women each, selected randomly from persons certified by the Dane County Social Services, Wisconsin as child care providers for aid recipients.
Methods: The control group received an initial interview/questionnaire and two follow-

ups conducted by the monitor team. The experimental group was closely involved in the educational, health service, psychological and social service, and safety components of the program.

Duration: April 1973-April 1974.

Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare; Community Coordinated Child Care, Dane County, Wisconsin.

33-RF-2 CRIME PREVENTION ASSOCIATION YOUTH MOTIVATION THROUGH DAY CARE

Investigator(s): C. Richard Cox, M.A., Administrative Assistant, Crime Prevention Association, Sylvania House, Second Floor, Broad and Locust Streets, Philadelphia, Pennsylvania 19107.

Purpose: To test the hypotheses that (1) day care children will benefit from having indigenous older teen-age youths as staff members, and (2) the youths will benefit from this experience and opportunity.

Subjects: 12 unemployed school dropouts, ages 17 to 20, from low income families; and 500 day care children, ages 6 to 13, whose socioeconomic status is poverty level.

Methods: In evaluating the demonstration project, pre- and posttesting, interviews, and standardized testing will be used.

Duration: September 1972-August 1974.

Cooperating group(s): School of Social Administration, Temple University, Philadelphia; Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare.

33-RF-3 DEVELOPING MEASURES FOR DAY CARE EVALUATION

Investigator(s): Jean E. Bedger, M.A., Research Director; and Judith N. Buben, M.A., Project Director, Council for Community Services, 64 East Jackson Boulevard, Chicago, Illinois 60604.

Purpose: To develop a manual capable of evaluating all facets of day care provided in centers and homes, which deemphasizes the evaluation of physical facilities, and emphasizes the evaluation of the day care environment's potential for enhancing children's cognitive and affective development.

Methods: The manual was formulated according to three defining orientations: (1) high degrees of specificity and rigorousness, (2) maximizing feedback conduction and information conservation, and (3) flexibility which maintains the cohesiveness of the evaluation process under the various possible circumstances of its use. The establishment of goals and objectives to be used as standards for the evaluation process was accomplished by analyzing both the directives of authoritative child care sources and the practices to which improvements were attributed in recent child development and Head Start research literature. Evaluation instruments contained in the manual are primarily adaptations of existing instruments. Over 3,000 instruments or commentaries on instruments were reviewed. The manual will first be pilot tested by an observer staff trained by the project in 25 day care facilities (16 centers and 9 homes). The second pilot test, conducted by personnel outside of the supervision of the project, will be conducted to field test the instructions and the instruments. The analysis of each field test centers on practicability in the field, comprehensiveness, inter-rater reliability, and the ability of the various instruments to discrim-

inate among facilities. After the second pilot test, the manual will be finally revised.
Duration: July 1972-July 1974.
Cooperating group(s): Office of Child Development, U.S. Department of Health, Education, and Welfare.
Publications: The manual is available from Publication Department, Council for Community Services.

33-RF-4 LONG-TERM MOTIVATIONAL-COGNITIVE EFFECTS OF DAY CARE

Investigator(s): Victoria Seitz, Ph.D., Research Associate, Department of Psychology, Yale University, 333 Cedar Street, New Haven, Connecticut 06510; and Lola B. Nash, M.A., Director, Elm Haven Day Care Center, New Haven, Connecticut.
Purpose: To explore the effects of a specialized day care program upon reflectivity, curiosity, level of aspiration, and other measures related to a general "effectance" motivation in children; and to study longitudinally developmental changes in strivings for competence in both disadvantaged and nondisadvantaged children.
Subjects: 29 children from low income backgrounds and a control group of 20 children from higher income backgrounds, ages 4 to 6.
Methods: The children from low income backgrounds are divided into two groups: 16 children receive a specialized program during kindergarten; 13 do not. These subjects are studied with a multiple-time-series, longitudinal design into which specific treatments are introduced. A standard longitudinal study design is used for the comparison group. From the period of late nursery school through the middle of first grade, the subjects will be seen in six to seven sessions. Special attention will be given to the nature of the interplay between motivational and cognitive variables and the degree to which they may be differentially influenced by the specialized program.
Duration: March 1972-May 1974.
Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare.

33-RF-5 EARLY SOCIAL DEVELOPMENT: PARENT AND CHILD PROGRAMS

Investigator(s): Robert P. Boger, Ph.D., Professor and Director, Institute for Family and Child Study, Michigan State University, East Lansing, Michigan 48824.
Purpose: To compare the effectiveness of various types of programs (focused either on family or educational systems) in providing socializing experiences which enhance the development of positive inter- and intragroup attitudes of preschool children, as evidenced by peer interaction; and to assess the effectiveness of various treatment models while holding the costs equal for each.
Subjects: Eight day care centers in Michigan in which approximately 280 children, age 4, are enrolled for at least 5 half days a week. All centers offer a full-day program and are comparable in terms of developmental program, licensing, and the heterogeneous enrollment of children from lower and middle socioeconomic classes.
Methods: The day care centers were randomly assigned to four treatment levels. Two centers each (including approximately 20 subjects each) received one of the following treatment levels: (1) regular day care center program (control), (2) day care center program with supplemental classroom activities, (3) day care center program with supplemental parent programs, and (4) day care center program with supplemental classroom activities and the parent program. The sex and socioeconomic level of the children in the centers were also

included as factors in the study's design. Sex and socioeconomic group variables were crossed with each other and also with respect to both center and treatment. The Brown Self-Concept Referent's Test and self- and mother referents were used to measure the child's self-concept. The heterogeneity of the child's indicated friendship choices during play situations was assessed. Classroom sociometric observations were conducted during free play to determine the heterogeneity of observed peer associates and the level of involvement with these peers. To assess peer social involvement (including social behavior, emotional tone, level of involvement, quality of interaction, physical behavior, verbal behavior, and the characteristics of peers chosen for interaction), play groups of four children were formed and videotaped for 15 minutes. These tapes were subsequently rated by the Observation of Social Behavior Instrument. A four-way multivariate analysis will be used to test the primary hypotheses relating to treatment differences and their relation to sex, socioeconomic, and geographical variables. Individual subjects will be used as the unit of analysis for this procedure. A completely balanced design will be achieved by random sampling of subjects from each cell from those with complete data for the entire study. Supplementary analyses will be performed using the day care center as the unit of analysis, with treatment as the independent variable and demographic group of subjects (i.e., sex and socioeconomic group) as the repeated measures dimension.

Duration: September 1973-September 1974.

Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare.

Publications: A final report is available from the Institute for Family and Child Study. "Parents Are Teachers Too" and "Socio-Dramatic Play" (curriculums used in Treatment Levels 1, 2, and 3) are also available from the Institute.

33-RF-6 EVALUATION OF PILOT PROGRAMS FOR CHILDREN

Investigator(s): Jacqueline Butler, M.A., Coordinator; John B. Hopkins, M.A., Research Analyst; and Michael E. Keown, M.Mgt., Research Analyst, Evaluation of Pilot Program for Children, Children and Youth Community Services, State of Tennessee Department of Mental Health, 406 Collier Avenue, Nashville, Tennessee 37211.

Purpose: To study the efforts of five communities to develop and expand Community Coordinated Child Care programs over a 3-year period from July 1971 to July 1974.

Subjects: Children and families served by day care and other preschool programs located in San Antonio, Texas; Edinburg, Texas; Athens, Georgia; Winston-Salem, North Carolina; and Juneau, Alaska.

Methods: Site specific data and comparable core evaluation data were collected. Sources of data included site visits by evaluation team members; monthly evaluation reports from on-site part-time research assistants; and frequencies of monthly contact with various citizens, agencies, and media (visibility information). Other data sources were interviews with participating citizens, interviews on child services, and five community wide agency surveys completed at regular intervals during a 3-year period.

Duration: July 1971-July 1974.

Cooperating group(s): Office of Child Development, U. S. Department of Health, Education, and Welfare.

33-RG-1 FAMILY HOME DAY CARE SYSTEMS DEMONSTRATION PROJECT

Investigator(s): Anthony Diodati, M.S.S., Assistant Executive Director, Associated Day Care

Services, Inc., 710 Jackson Street, Philadelphia, Pennsylvania 19148.
Purpose: To determine whether quality developmental child care can be provided in a home based setting, and to design alternative models for the delivery of home based developmental child care.
Subjects: 10 family day care systems selected by the Office of Child Development in Oregon, Wisconsin, Montana, Oklahoma, Alabama, and Pennsylvania.
Methods: At each site 40 homes were randomly selected. Of these 40 homes, 20 were selected randomly for the control group and 20 for the demonstration or experimental group. Monitoring visits were conducted monthly for the first 4 months and every 2 months thereafter.
Findings: Quality developmental child care in a home based setting is directly related to the basic orientation of the agency and to the supportive services it provides.
Duration: February 1973-March 1974.
Cooperating group(s): Developmental Associates, Inc., Washington, D.C.; Office of Child Development, U.S. Department of Health, Education, and Welfare.

33-RH-1 PROSPECTIVE STUDY IN CHILD ABUSE

Investigator(s): Roger V. Codal, M.D., Director, Developmental Evaluation Center, Department of Health and Hospitals, Denver General Hospital, Denver, Colorado 80204.
Purpose: To count the number of children hospitalized at Denver General Hospital with a diagnosis of nonaccidental trauma or failure to thrive; to study the cognitive and physical development of abused children; and to determine if supportive intervention is effective.
Subjects: Hospitalized, abused, low income children, ages 0 to 6, and their families.
Methods: In this 4-year longitudinal study, all hospitalized children are randomly assigned to either the experimental or control groups. The experimental group receives coordinated consultation and/or supportive therapy, while the control group receives no treatment. The control group consists of normal children, matched with the experimental group for age, sex, race, and socioeconomic status. Children are tested upon hospitalization, after 6 months, and yearly thereafter. Testing instruments include the Bayley Scales of Infant Development and the McCarthy Scales of Children's Abilities.
Duration: July 1972-July 1976.
Cooperating group(s): Children's Bureau, Office of Child Development, U.S. Department of Health, Education, and Welfare.

33-RH-2 CHILD ABUSE RESEARCH

Investigator(s): Morris J. Paulson, Ph.D., Associate Professor in Residence, Department of Psychiatry, School of Medicine, University of California at Los Angeles, 760 Westwood Boulevard, Los Angeles, California 90024.
Purpose: To identify causal factors contributing to child abuse; to intervene in the rehabilitation of identified parents who have abused, or are fearful of psychological and physical abuse of children; to prevent child abuse through the development of classes on parenting and prophylactic group therapy programs with prenatal mothers; and to educate professional, paraprofessional, and lay groups on the subject of child abuse.
Subjects: 80 fathers and mothers, ages 16 to 42, referred by community agencies or self-referred for problems related to childrearing as manifested through neglect and emotional and physical abuse of children.
Methods: Multivariate statistical procedures will be applied to psychological test data,

and experimental and control samples will be compared. Profiles of abusive parents and psychological scales to measure the potential for child endangering are also being devised.
Findings: Experimental scales have been developed and are being applied to a cross-validation group. Descriptions of the patient population and of the effects of group therapy are contained in the investigator's publications.
Duration: 1970-continuing.
Cooperating group(s): Los Angeles County Department of Public Social Services.
Publications: Paulson, M.; Savino, A. *et al.* Parents of the battered child: A multidisciplinary group therapy approach to life threatening behavior. *Life-Threatening Behavior*, 1974, 4(1), 18-31; Paulson, M. and Chaleff, A. Parent surrogate roles: A dynamic concept in understanding and treating abusive parents. *Clinical Child Psychology*, 1973, II(3), 38-40; Paulson, M. and Blake, P. The physically abused child: A focus on prevention. *Child Welfare*, 1969, XLVIII(2), 86-95; Paulson, M. and Blake, P. The abused, battered and maltreated child. *Trauma*, 1967, 9(4), 1-136.

33-RJ-1 COMPARATIVE STUDY OF THREE MODES OF SERVICES TO CHILDREN

Investigator(s): Ludwig L. Geismar, Ph.D., Professor and Director; and Isabel Wolock, M.A., Associate Professor, Assistant Director, Social Work Research Center, Graduate School of Social Work, Rutgers University, New Brunswick, New Jersey 08903.
Purpose: To assess the comparative effectiveness of three patterns of child services by comparing the social functioning of children and their natural families who are treated at home with the social functioning of children who are treated in foster care and agency operated residence homes.
Subjects: 100 children from problem-ridden homes.
Methods: Of the 100 subjects, 50 children are treated in their own homes, 25 are placed in foster care, and 25 are served in residence homes. The children's psychosocial functioning is assessed at the beginning of the study and after 24 months of service by a specially designed role functioning profile. The children's natural families are studied by administering a modified version of the St. Paul Scale of Family Functioning. The nature and scope of services will be analyzed and correlated with service outcomes.
Duration: January 1970-December 1974.
Cooperating group(s): Association for Jewish Children, Philadelphia, Pennsylvania.

33-RL-1 CHILDREN IN CRISIS

Investigator(s): Roberta Hunt, M.S.W., Research Consultant, National Study Society, West Side Children's Services, 205 Maryland Street, Buffalo, New York 14201.
Purpose: To develop an innovative service to children and their families with a 24-hour, community based crisis intervention and emergency service.
Subjects: Approximately 50,000 residents of the Lower West Side of Buffalo, including Puerto Ricans, American Indians, Italians, and Blacks. The majority of served clients is from lower socioeconomic groups.
Methods: Empirical data collection; statistical treatment.
Duration: December 1971-June 1974.
Cooperating group(s): Office of Child Development, U.S. Department of Health, Education, and Welfare.
Publications: A final report is available from Kenneth Han, West Side Children's Services.

HEALTH SERVICES

33-SA-1 EARLY AND PERIODIC SCREENING, DIAGNOSIS, AND TREATMENT: A REPORT ON THE DANE COUNTY PILOT PROGRAM, 1973

Investigator(s): Ellen M. Naor, M.A., Research Analyst, Bureau of Health Statistics; and Richard W. Biek, M.D., M.P.H., Director, Bureau of State-Local Relations, Division of Health, Wisconsin Department of Health and Social Services, Madison, Wisconsin 53702.
Purpose: To try out and assess systems for outreach, follow-up, and record-keeping in a general screening program of medicaid-eligible children in Wisconsin; to estimate the yield of a screening program in terms of new and/or untreated findings; and to determine the costs of the program.
Subjects: 236 males and 272 females, under 21, who are eligible for medicaid and who participated in the screening program in Dane County, Wisconsin.
Methods: Public screening clinics staffed by public health nurses provided a standard set of screening and immunization services. Initial notification of the program was conducted by a mail survey, and all who expressed interest were contacted. About a third of those contacted ultimately participated in the voluntary program. The results of screening were recorded and tabulated. Children with abnormal findings were referred to the appropriate physician, dentist, medical specialist, or public health nurse.
Findings: The pilot program assessment indicated needed changes in organization and delivery, which were implemented as the program was extended to state-wide coverage. The health history, physical, and dental assessments yielded the greatest number of previously untreated findings (approximately 25 with findings per 100 screenees). Minimal and maximal estimates of the probable costs of an early screening program were obtained.
Duration: July 1973-December 1974.
Cooperating group(s): Wisconsin Department of Health and Social Services, Divisions of Health and Family Services.
Publications: Naor, Ellen M. *Early and periodic screening, diagnosis, and treatment. A report on the Dane County Pilot Program, 1973.* Madison, Wisconsin: Department of Health and Social Services, Division of Health, February 1974.

33-SA-2 THE DEVELOPMENT AND EVALUATION OF A COMMUNITY-WIDE OCULAR SCREENING PROGRAM IN INFANT AND PRESCHOOL CHILDREN

Investigator(s): Walter J. Laborde, Dr. P.H., Director, Eye Anomalies Section, Division of Health Maintenance and Ambulatory Patient Services, Louisiana Health and Social and Rehabilitation Services Administration, P. O. Box 60630, New Orleans, Louisiana 70160.
Purpose: To measure the proficiency that trained technicians can attain in the identification, referral, and follow-up of ocular disorders in young children.
Subjects: 2,512 children, ages 2 to 5.
Methods: After receiving short-term training under the direction of a certified orthoptist, three technicians tested the subjects for ocular disorders. All of the subjects were also examined by ophthalmologists. The results of tests administered by technicians were compared with the medical findings of the ophthalmologists.
Findings: Statistical analysis of the data indicates the effectiveness of the various eye testing methods used compared with medical diagnostic information.

Duration: July 1970-completed.
Cooperating group(s): Tulane University, New Orleans, Louisiana; Louisiana State Department of Health.
Publications: Results of the study are available from the investigator.

33-SB-1 STUDY OF THE DETERMINANTS OF ILLNESS BEHAVIOR IN CHILDREN: CHILD INITIATED CARE

Investigator(s): Charles E. Lewis, M.D., Professor; and Mary Ann Lewis, R.N., M.S., Director, Primex Program, School of Medicine, Center for the Health Sciences, University of California at Los Angeles, Los Angeles, California 90024.
Purpose: To study the determinants of illness behavior in children, and to develop a child initiated health care program.
Subjects: 369 boys and girls, ages 6 to 12, who attend a university laboratory school.
Methods: A child initiated care system has been installed in the school, in which students freely initiate their visits to a nurse practitioner. An intervention has been developed which focuses on involving the child in the decision making process related to treatment for his problem and its disposition.
Findings: Findings support a model of illness behavior among young children that has as key variables cognitive state of development, sex, cognitive style (field dependence, independence), social learning through role models, as well as perceived vulnerability, severity of events, and perceived benefits of care.
Duration: July 1971-August 1974.
Cooperating group(s): University Elementary School, University of California at Los Angeles; National Center for Health Services Research and Development, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare; Bureau of Health Services Research, Health Resources Administration, National Institutes of Health, U.S. Department of Health, Education, and Welfare.

33-SD-1 DELIVERY OF CARE TO PREGNANT TEEN-AGERS AND THEIR OFFSPRING

Investigator(s): Willis A. Wingert, M.D., Director, Pediatric Ambulatory Service, Medical Center, University of Southern California, Pediatric Pavilion, 1129 North State Street, Room CD ID 18A, Los Angeles, California 90033.
Purpose: To determine whether a specially designed clinic and a personal advocate (a public health nurse or an indigenous health aide) affect the outcome of teen-age pregnancies related to the mothers' (1) return to school, (2) use of contraception to prevent another pregnancy, and (3) acquisition of effective mothering techniques; and to determine effects related to the infants' maximal physical, emotional, and intellectual development.
Subjects: 540 girls ages 12 to 16: 90 percent, from ethnic minority groups; 25 percent, non-English speaking.
Methods: Services provided include pre- and postnatal obstetrical care of the adolescent and pediatric care and health supervision of the offspring. Home visits are included in the services. An indigenous health aide or a public health nurse supervises the mother's care. The sample of mothers is divided into various groups depending upon the length of prenatal supervision. The offspring are divided into an experimental group and a control group. The experimental group is stimulated by a structured play therapy technique every 2 weeks, and this technique is taught to the mother. The control group receives health supervision but no additional stimulation. At the end of 1 year, the parameters mentioned above (return

to school, use of contraception, etc.) are measured.
Findings: Seventy-three percent of the mothers returned to school; 82 percent accepted contraception. Prematurity was reduced to 11 percent, but the incidence of toxemia remained high (18 percent). Mother-infant interaction studies are in progress.
Duration: 1968-continuing.
Publications: A paper read at the Annual Meeting of the Ambulatory Pediatric Association, April 30, 1974, Washington, D.C.: Pazdral, W. E. and Wingert, W. A. Effectiveness of intensive prenatal care of the pregnant teenager.

33-SD-2 RESEARCH ACTIVITIES, PRIORITIES, AND NEEDS IN MATERNAL AND CHILD HEALTH — 1973

Investigator(s): Allan C. Oglesby, M.D., M.P.H., Associate Clinical Professor; Alfred C. Hexter, M.A., Biostatistician; Hyman Goldstein, Ph.D., Research Biostatistician; and Helen M. Wallace, M.D., M.P.H., Professor and Chairman, Maternal and Child Health Program, School of Public Health, University of California at Berkeley, Berkeley, California 94720.
Purpose: To determine the research activities, priorities, and needs in maternal and child health in 1973 in the United States.
Subjects: 489 national, state, and local health and related agencies; and professors of maternal and child health in schools of public health.
Methods: In preparation for the National Conference on Maternal and Child Health held in Berkeley, May 1973, a study form on research priorities, activities, and needs in maternal and child health was sent to all state directors of Maternal and Child Health and Crippled Children's Services; directors of maternal and child health in local health departments serving cities with a 1970 population of 100,000 or more, and in local health departments serving counties having a 1970 population of 500,000 or more; Maternal and Infant Care Projects; Children and Youth Projects; University Affiliated Centers for the Developmentally Disabled; professors of maternal and child health in schools of public health; and Maternal and Child Health Services Regional Offices.
Findings: Replies were received from 298 agencies (response rate, 60.9 percent). Two hundred and sixty-two agencies indicated a priority in maternal and child health research. Nearly half (46.6 percent) of the agencies responding indicated delivery of services as the topic or priority in need of research. In fact, each type of agency, except Maternal and Infant Care Projects, listed delivery of services as their first or second priority. Evaluation of services was mentioned frequently (30.5 percent); and factors in pregnancy and childbirth, family planning, sex education, and venereal disease were also given high priority. A total of 123 agencies (41.3 percent of respondents) mentioned involvement in maternal and child health research activities. The most frequently mentioned areas of current research were factors in pregnancy and childbirth (mentioned by 26 percent of agencies doing research). Other areas of high frequency were delivery of health care services, family planning, sex education, venereal disease, childrearing and child abuse, and handicapped children. One-third (29.5 percent) of the local and state health departments reported some type of research activity. More than half (50.3 percent) of the agencies, other than schools of public health, expressed an interest in obtaining consultation in research design. A cross-tabulation of the question on research with the question on consultation showed that agencies doing research were more interested in obtaining consultation than those not doing research. Most responding agencies (53 percent) indicated they felt more maternal and child health personnel are needed with training in research design. Of the 201 agencies that responded to the question on factors preventing studies, the three most commonly cited reasons were lack of funds (53.2 percent), lack of staff (45.3 percent), and time pressure (29.9 percent). A number of agencies (27.9 percent) felt research was not

appropriate to their type of agency or should not be undertaken until they were better able to satisfy the demands for services. Of the total agencies responding, 122 (40.9 percent) had one or more suggestions for increasing the number of maternal and child health personnel trained in research. The most common suggestion was to provide more financial support for training and research. Suggestions concerning present practices in training and in provision of services included more exposure to other disciplines, both in training and in the agencies (27.9 percent); providing more extension, night school, short-term and inservice training to persons currently employed (23 percent); and broadening training to include research methods as part of the regular curriculum, particularly stressing research related to services, including evaluation (20.5 percent). The investigators concluded that it is clear that failure to do research is not caused by lack of staff interest; rather, it is caused by lack of funds and the need for additional staff trained in research.
Duration: December 1972-December 1973.

33-SF-1 NATIONAL SURVEY OF FREE CLINICS

Investigator(s): Jerome L. Schwartz, Ph.D., Medical Care Consultant, 3101 Benvenue Avenue, Berkeley, California 94705.
Purpose: To gather data on free clinics in the United States, including type, location, services, patients, funding, organization, staffing, and purposes.
Subjects: Patients attending (1) neighborhood clinics — minority group members, infants to the aged; (2) sponsored clinics — primarily ages 16 to 24; (3) street clinics — primarily ages 12 to 26; and (4) youth clinics — primarily ages 12 to 24.
Methods: Data will be collected by telephone, mail, and personal interview.
Findings: There are now about 200 free clinics in the nation. Women and small children predominate in minority free clinics. Adolescents predominate in street and youth free clinics.
Duration: February 1970-continuing.
Cooperating group(s): University of California, Berkeley, California.
Publications: Smith, David; Bentel, David; and Schwartz, Jerome L. (Eds.), *The free clinic: A community approach to health care and drug abuse.* Beloit, Wisconsin: STASH Press, 1971; First national survey of free medical clinics, 1967-69. *HMSHA Health Reports,* September 1971, 86, 775-787.

33-SF-2 A STUDY OF CLIENT CHARACTERISTICS, EGALITARIAN ORIENTATION AND INSTITUTIONAL FACTORS RELATED TO RESPONSE PATTERN TO PUBLIC AND VOLUNTARY FREE HEALTH SERVICES

Investigator(s): Gerald R. Wheeler, Ph.D., Chief, Division of Research, Planning, and Development, Ohio Youth Commission, 2234 South Hamilton Road, Columbus, Ohio 43227.
Purpose: To explore three related elements of the health care delivery system in the United States: the historical development of free health care, client and institutional factors related to clients' utilization of governmental and private free health services, and the social policy implications of private and public free health care.
Subjects: 295 clients treated in two free private clinics and one free public clinic in Columbus, Ohio.
Methods: Between 17 and 25 percent of the average monthly rate of clinic admission patients and key clinic administrators were surveyed. The investigator hypothesized that income and race would be related to client response patterns to health care, that selection

of mode of free care would be affected by the clients' egalitarian orientation, and that social change organization orientation would be associated with the voluntary free clinic. Measuring instruments included a pretested egalitarian orientation scale, a response inventory, a social change index, and a limited observation process.

Findings: Significant differences in client characteristics appeared in the clinics. Preferences were indicated in the utilization pattern of users. Specific socioeconomic and cultural barriers to equal access to health care were demonstrated. A social change organiaztion orientation was associated with the private free clinic.

Duration: June 1973-completed.

Publications: Copies of the study are available from the investigator.

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Index Medicus, National Institutes of Health. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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The Science Information Exchange, Smithsonian Institution, 209 Madison National Bank Building, 1730 M Street, N.W., Washington, D.C. 20036 provides to qualified investigators, for a fee, selected abstracts of current research supported by foundation or government grants. The exchange covers such fields as medicine, nursing, public health, nutrition, psychology, education, anthropology, mental health, and intercultural relations.

The Library of the National Bureau for Child Welfare (Voor Kinderbescherming), Stadhouderslaan 150, The Hague, The Netherlands publishes abstracts of articles in the field of child welfare each month. These are in Dutch, but those familiar with the Universal Decimal System would be able to understand something about the articles. The subscription rate for documentation on cards is 30 guilders (approximately $8.40).

RESEARCH RELATING TO CHILDREN
ERIC/ECE 805 West Pennsylvania Avenue
Urbana, Illinois 61801

If you are currently engaged in research on children or their families, we would appreciate your cooperation in providing a short summary of your work for inclusion in the next issue of *Research Relating to Children.*

The ERIC Clearinghouse on Early Childhood Education has been funded by the Office of Child Development to collect and disseminate information on current research relating to children and their families. It is the purpose of the clearinghouse to make such information available to research investigators and others concerned with research in child life.

The instructions on the third page of this form will serve as a guide for your summary. You will, of course, receive a free copy of the issue in which your study appears.

If you know of other researchers whose work might be of interest to the Clearinghouse, please give name(s) and address(es) below:

_____

_____

_____

_____

Thank you for your cooperation.

INFORMATION SUPPLIED BY

Name _____

Position _____

Organization and address _____

_____

_____

_____

City _____ State _____

Zip Code _____ Phone ( ) _____

SUMMARY OF RESEARCH PROJECT

TITLE:

PURPOSE:

SUBJECTS (Sample): (Please include number, age range, sex, description of subjects.)

METHODS: (Please discuss research design: control groups, methods of data collection, research instruments, unique features of research, statistical treatment.)

FINDINGS TO DATE:

DATE PROJECT INITIATED:		ESTIMATED TERMINAL DATE:
PRINCIPAL INVESTIGATOR(S):	DEGREE:	POSITION AND ORGANIZATION:

COOPERATING GROUPS: (In the research itself or in the research funding.)

PUBLICATION REFERENCES: (If no publication is planned, please indicate under what conditions data and results will be available.)

INSTRUCTIONS

Please report studies in progress or completed within the last year that:

center on children or their families in such areas as child growth and development, intelligence, personality, education, social adjustment, family life, physical and emotional disorders

concern service programs in the fields of child health, child welfare, or special education

Please DO NOT report:

animal studies

studies already published in sources generally available in major libraries across the country

demonstration projects, unless there is a formal plan for evaluation

regularly collected material such as annual reports, work preparatory to writing handbooks; directories

research based on secondary sources

Originally established in 1912, the Children's Bureau has consistently been concerned with all matters pertaining to the welfare of children and child life. In 1948, the Clearinghouse for Research in Child Life was established within the Bureau specifically to collect and disseminate information about current research relating to children. In July 1970, the ERIC Clearinghouse on Early Childhood Education, part of the national Educational Resources Information Center network, assumed the production of *Research Relating to Children*, a publication of the Bureau's Clearinghouse for Research in Child Life. The aims of this publication are consistent with the information analysis goals of the ERIC system. *Research Relating to Children* will provide information on current research relating to children and their families to educators, researchers and others in the area of child life who find the need for such a service.

Research Relating to Children
ERIC/ECE
805 West Pennsylvania Avenue
Urbana, Illinois 61801

The following investigators are doing research concerning children or services for children. Send report forms to obtain information.

Name _____

Address _____

_____ Zip Code _____

Name _____

Address _____

_____ Zip Code _____

Name _____

Address _____

_____ Zip Code _____

Signed _____

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Zip Code _____

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